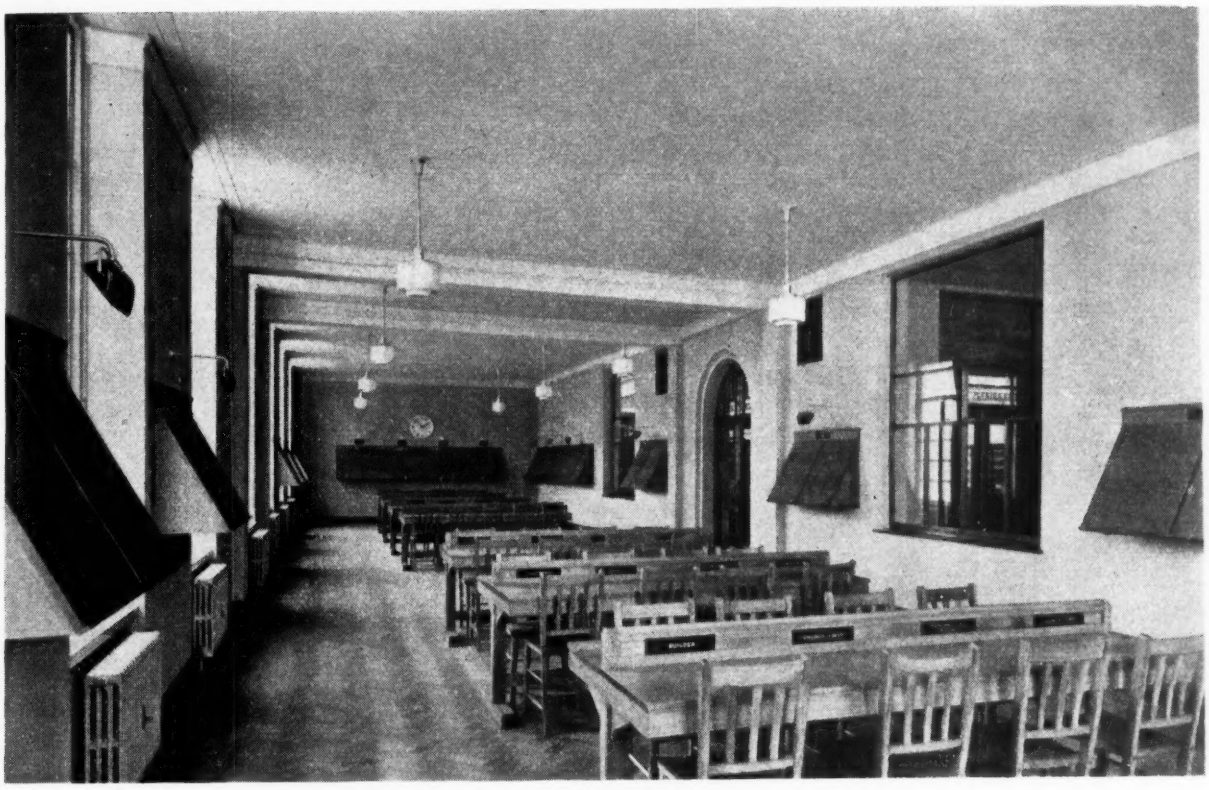
# THE BUILDER
## A JOURNAL FOR THE ARCHITECT & CONSTRUCTOR

VOL. CXLVIII. MARCH 29, 1935. No. 4808

CHELMSFORD CIVIC CENTRE—CENTRAL LIBRARY : General Reading Room.

MESSRS. CORDINGLEY AND McINTYRE, F. & A.R.I.B.A., Architects.

(See page 597.)

# MEETINGS

FRIDAY, *March* 29.

*Association of Architects, Surveyors and Technical Assistants.* Annual Dinner. At the Rembrandt Rooms, Brompton-road, South Kensington. 8 p.m.

*Cement Marketing Company.* Mr. L. H. Keay, C.B.E., on "Working-class Flats—a Solution of the Problem of Rehousing." At the Imperial Institute, South Kensington, S.W.7. 6.30 p.m.

MONDAY, *April* 1.

*Society of Chemical Industry (London Section).* Dr. Harold Moore, C.B.E., F.I.C., on "Corrosion-Resisting Non-Ferrous Alloys." At Burlington House. 8 p.m.

WEDNESDAY, *April* 3.

*Institute of Builders.* Annual Dinner. At the Carpenters' Hall, E.C. 7.15 p.m.

*L.C.C. Central School of Arts and Crafts.* Sir Banister Fletcher on "Modern Architecture." 6 p.m

*Institution of Heating and Ventilating Engineers.* Mr. C. W. Ulett on "The Flow of Air and Gases in Small Area Conduits." At the London School of Hygiene and Tropical Medicine, W.C.1. 7 p.m

THURSDAY, *April* 4.

*West Yorkshire Society of Architects.* Students' Union Evening. At Leeds College of Art. 6.15 p.m.

*Society of Antiquaries.* Mr. B. H. St. J. O'Neil on "Dartmouth Castle." 8.30 p.m.

FRIDAY, *April* 5.

*Institution of Structural Engineers (Western Counties Branch).* Branch Annual Meeting. At the Merchant Venturers' Technical College, Bristol. 7.15 p.m.

*Institution of Structural Engineers (Midland Counties Branch).* Annual General Meeting. At York House, Birmingham. 6.30 p.m.

*Institution of Civil Engineers.* Paper on "The Development of Modern Bridge Design." By Mr. T. W. Brown, B.Sc. At Glasgow. 7.30 p.m.

SATURDAY, *April* 6.

*Yorkshire Educational Association for the Building Industry.* Sir Raymond Unwin on "Craftsmanship in the Building Industry," 2.30 p.m.; and Mr. E. G. Warland on "Modern Masonry," 6 p.m. At Mappin Hall, Sheffield.

*Institution of Structural Engineers (South-Western Counties Branch).* Annual General Meeting.

MONDAY, *April* 8.

*Chartered Surveyors' Institution.* Mr. Nigel Norman, B.A., on "The State of Aviation in Great Britain with reference to its effect on Property." At 12, Great George-street, S.W.1. 6.30 p.m.

TUESDAY, *April* 9.

*Builders' Clerks' Benevolent Institution.* Annual Dinner. Major Leslie Shingleton, O.B.E., in chair. Holborn Restaurant. 7 p.m.

WEDNESDAY, *April* 10.

*Society of Chemical Industry.* Mr. F. C. Lea on "Composition and Properties of Portland Cement," and Mr. F. L. Brady on "Factors affecting Durability of Cast Stone."

*St. Paul's Ecclesiological Society.* "Some Recent Investigations at St. Paul's." By Mr. W. Godfrey Allen, F.R.I.B.A. At 66, Portland-place, W.1. 8 p.m.

*Institution of Civil Engineers.* Mr. J. L. Hodgson, B.Sc., on "Economic Outlook for Engineers." At Great George-street, S.W.1. 6 p.m.

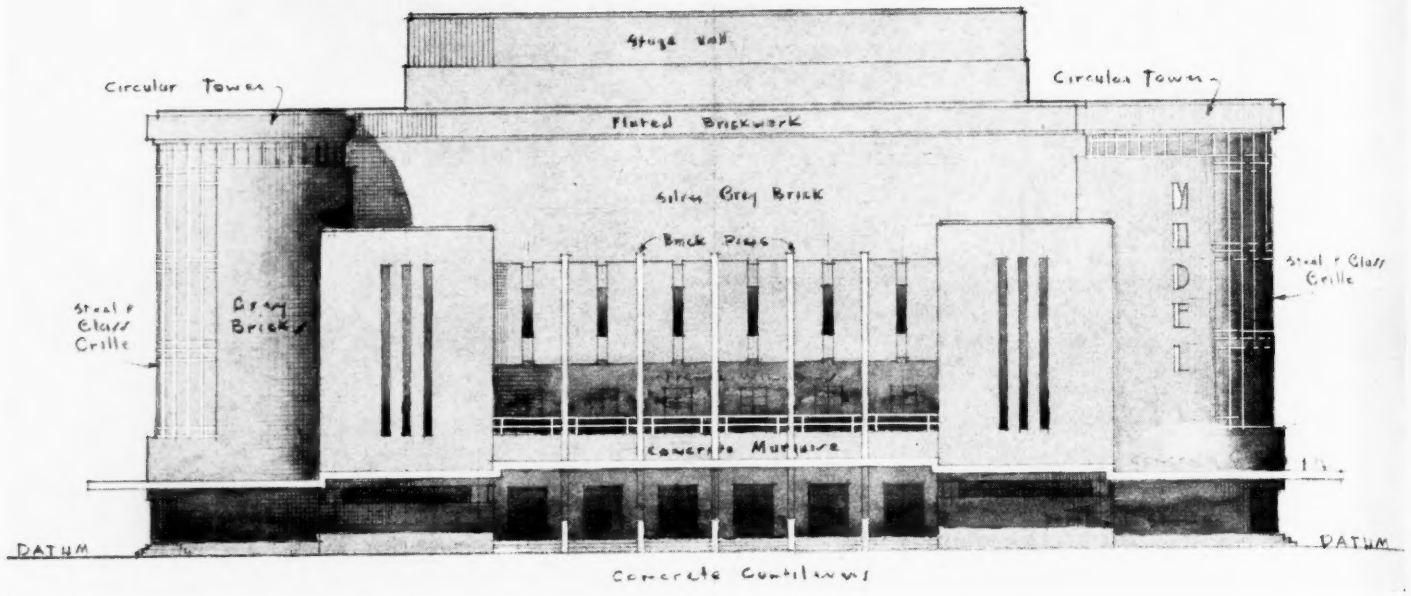
THURSDAY, *April* 11.

*Institution of Structural Engineers.* Joint Meeting with British Section of Société des Ingénieurs Civils de France. At Institution of Mechanical Engineers, London. 6 p.m.

FRIDAY, *April* 12.

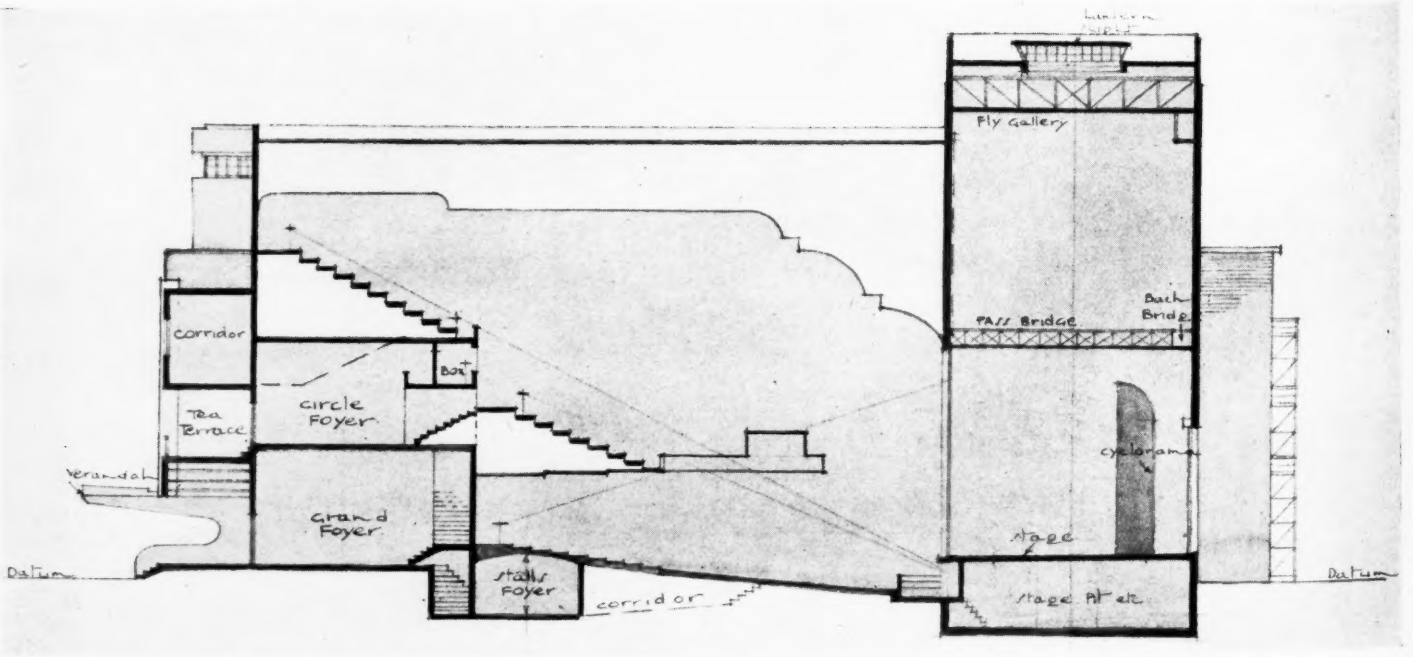
*Institution of Sanitary Engineers.* Mr. Cyril Poole on "The Manufacture of Concrete and Stoneware Pipes and their Uses." At Caxton Hall, S.W.1. 6 p.m.

*Birmingham and Five Counties A.A.* Mr. H. G. Wicks, A.R.I.B.A., on "Excursion to Caudebec."




FRONT ELEVATION.

SIDE ELEVATION.




LONGITUDINAL SECTION.

## SILVER JUBILEE MODEL THEATRE.

MR. GEORGE E. TONGE, F.R.I.B.A., Architect.

(See page 597.)

# COTTAGES *VERSUS* FLATS

IN a recent issue of *The Times* a letter appeared over the signatures of several architects well known in connection with the study of housing. In this letter the relative merits of working-class dwellings in flat and cottage form were discussed, with conclusions bearing strongly in favour of the latter. The subject is such an important one that we feel there is still more to add to the discussion, bearing as it does upon so many important and pressing questions in connection with building to-day.

At the moment we are concerned with a number of problems which directly affect these considerations. The question of the abolition of slums is the first and most obvious. That of high or low buildings for our cities is another, while the cost of building generally, as determined by the form of building, is yet a third. Another aspect which touches the fringe of all three, is that of the standard of living we are demanding for our working-class population. In the letter to which we have referred those considerations which affect the sociological aspect have been barely touched upon, and as our ideals must always be sought along the avenue of practical politics we cannot regard the subject as properly ventilated until we have studied ways and means from all angles.

The problem of the slums is a legacy from times which reflect little credit upon the social intelligence of industrial England. Perhaps the only virtue of this black chapter in history is that it has created an object lesson which will never be forgotten. It was essentially wrong in principle that communities should be huddled together upon a minimum area of land. The fact that they were so congregated, and that subsequent developments have aggravated the tendency remains, and we have got to start thinking about our problem from within these conditions. Recent experience has shown that the working man is reluctant to leave the district in which he has work. The L.C.C., for example, has created entire new townships for the purpose of housing working men and their families under better conditions than they previously enjoyed. There will be few, however, who will say that these new townships are peopled by the class for which they were intended. However excellent the intention, it is fruitless to pursue an ideal if the followers lag behind.

It seems inevitable, therefore, that the housing of the working-class must be, to a great extent, concentrated near those areas where housing conditions have become thoroughly bad. In other words, the cities cannot be transformed beyond certain defined limits. When we consider the question of clearing areas of houses and providing new accommodation in or near the same districts, and add to this enterprise the desire to give more room, more light and more air to each family, it is obvious that the idea of tenement or flat development cannot be excluded. The merits have to be weighed, not so much as between flat or cottage in such cases as this, as between the practical politics of securing the best conditions of light, air, accommodation and convenience, for a reasonable maximum of population upon a reasonable minimum area of ground. In such cases we have to accept those inconveniences and objections to tenement buildings as the price paid for solving a practical problem in the best possible way.

The question of high or low buildings in the cities determines the practicability of house-building methods. If there were anyone sufficiently industrious and far-seeing to tackle the problem, many of the problems of building up or building out could be solved almost as an exercise in geometry or mathematics. To approach this aspect of the problem in this way, it would be necessary to clear the mind entirely of all prejudice against one method or another, and so we remain with the idea of tenement buildings still open.

Upon the question of cost, the problem is even still more open. In actual building cost there is no doubt that the high building has nothing to claim to its advantage as compared with the two-story cottage. The complications of building at height at least cancel out those problematical savings in foundations and roofing which the tenement building appears to offer. The comparison becomes more open when site values are added to building costs. Land in the cities has acquired an enormously increased value as compared with the open country site, and these values cannot be wiped out by Act of Parliament with complete justice to all interested parties. What can be wiped out are those fictitiously inflated values which land-owners are apt to place on their land when a demand appears on the horizon. This sort of thing can be checked by law under present powers if authorities still act without fear or prejudice, and a fair interpretation of the principle of zoning, even in built-up areas, could be made to serve a great social purpose which would do much alone to solve the housing problem.

Turning to the purely social aspect of the problem, there is no doubt that most people, given a free choice, would choose the cottage standing in its own garden as a place to dwell in. The advantages of individually-occupied gardens and houses conveniently near the street, must have a marked effect upon social character. But it would be foolish to deny that there has grown up an urban-minded community, where close contact with neighbours has become more a thing to be desired than avoided. This social feeling carries a certain amount of merit which other ways of living deny, and though it may be far out-weighed by other considerations of great value, we cannot entirely write it off in striking our balance-sheet of advantage and disadvantage.

We have a great sympathy for the ideas behind the letter which we have quoted, but we feel that it would be doing small service to the cause which it supports if we ignored those many factors which seems to tend in an opposite direction. We are inclined to think that the housing problem of the present day and the immediate future, will be solved in the usual British way, namely, one of compromise ; and that, again in the usual British way, we shall make the best use of all means which present themselves. In other words, we shall make use of the multi-story building where this seems to be a sensible solution, and we shall do it well. At the same time, and in other places, where pressure is less acute, we shall lay out our garden cities of small cottages in a way equally desirable. We are convinced, however, that if we exclude entirely from our minds one or other solution, we shall be creating another problem far more acute than any we have yet experienced.

# NOTES

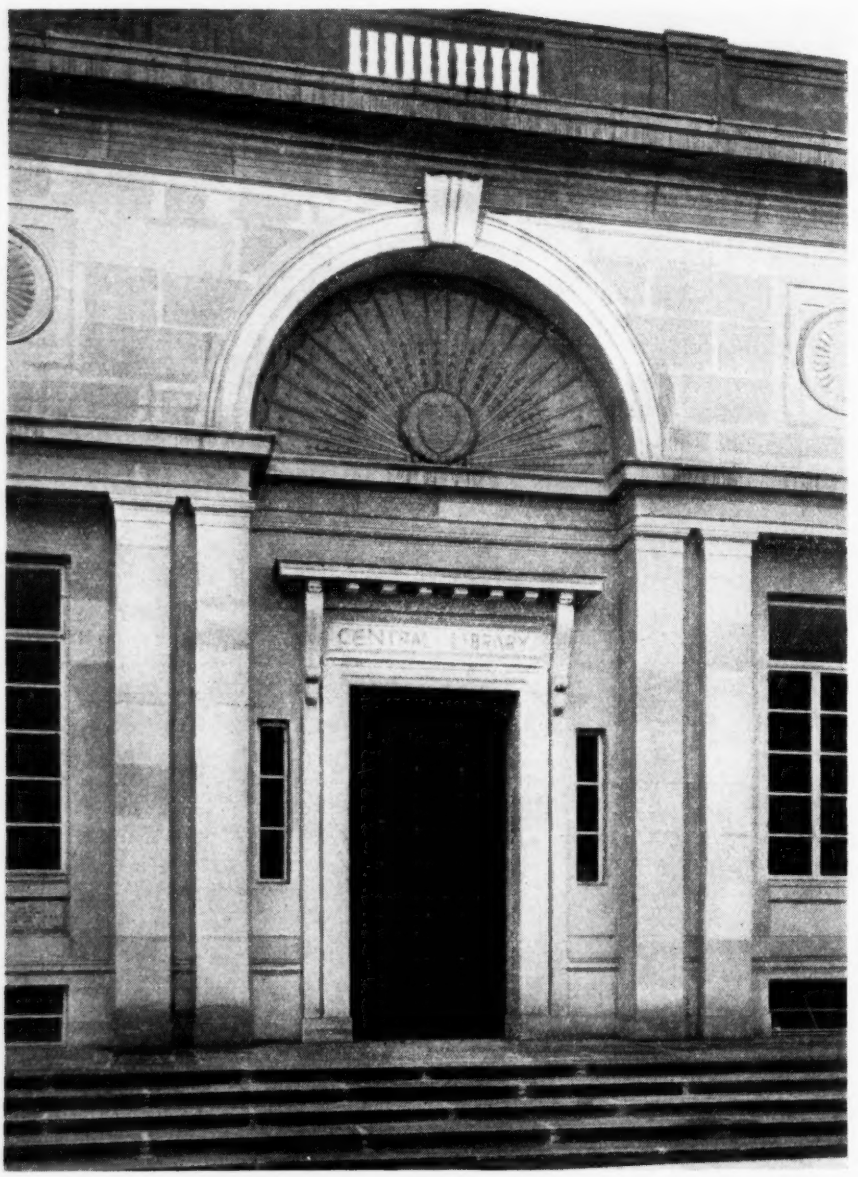
**The Work of Smith and Brewer.**

THE paper on "The Work of Smith and Brewer," read by Mr. H. M. Fletcher at Monday's meeting of the R.I.B.A., was a just and sensitively expressed appreciation of the work of a firm of architects whose output, though comparatively limited, was of a very high quality. Though working mainly in the classical tradition, Smith and Brewer were no copyists; there was a freshness and originality about their work that gave it a distinction often lacking in so-called classical design. As the lecturer said, their work was classic, not in the historical but in the spiritual sense, showing an "untiring search for proportion and perfection." It is from that point of view that the classical tradition, in these days of experimental uncertainty, still has its value for the architectural student. A further point of interest, stressed by the lecturer and those who took part in the discussion, was the real partnership that existed between the two men who, "though of markedly different types, found the means of fusing their separate gifts in the creation of works of architecture." The partnership was an ideal one, and their success as a firm was no doubt due to their sympathetic understanding of each other and appreciation of the art they followed and their practice of meeting their clients half way, as the lecturer said, and taking them into something like partnership. Smith and Brewer were sincere artists, and our only regret must be that their output was not greater.

**Greater London Drainage.**

WE have received a copy of the report on the Greater London Drainage,* in which it is claimed that a considered policy for the disposal of sewage in the London drainage area (an area of over twenty-five miles radius from Charing Cross) has become necessary, owing to the large growth of the population in that area. It is proposed that the area should, in the future, be served by ten or fewer centralised disposal works. The proposals have not been worked out in detail; indeed, the Minister of Health invites comments on the report and on the proposals contained in it. We hope after considering it more fully to refer to this important document in some detail.

* H.M. Stationery Office.




CHELMSFORD CIVIC CENTRE—CENTRAL LIBRARY: Detail of Main Entrance.
MESSRS. CORDINGLEY AND McINTYRE, F. & A.R.I.B.A., Architects. (See page 597.)

**The Return of the Window-Box.**

MANY who read the report of the London Society's annual general meeting in our last issue will have noted with pleasure the movement on hand to restore the London window-box to its former popularity. The habit of decorating buildings with growing flowers has waned during recent years, so that an effort to encourage the custom deserves the fullest support. The recently formed London Gardens Society—of which Sir Wyndham Deedes is chairman—is giving advice and practical help towards this end and has approached the principal London boroughs and statutory housing associations with a view to making provision for window-boxes on all new tenement blocks. This is, we think, already being done by certain voluntary housing associations who have provided slots in the concrete balcony walls in which soil may be placed for growing flowers. This is an idea which might be extended, with great decorative effect, to some of London's commercial buildings.

**"Oxford, 1995."**

How Oxford might be spoiled by uncontrolled building is the subject of an ironic sketch called "Oxford, 1995," published in the magazine of the Oxford Society. This was written by Mr. H. J. Denham, the Director of the Institute for Research in Agricultural Engineering. The following is an extract: "The Colleges are still to be found by the curious visitor in the old centre of the town, dwarfed and shadowed by the new commercial and governmental buildings. The sky-scraper era started, of course, with the new Bodleian, which was rapidly outclassed by the development of the Broad-street-Cornmarket-street area by the City Council, who had to relax the regulations for the height of buildings to obtain the full value of their building sites. But of the older structures many have been lost in the last half-century. St. Mary's Church unfortunately perished in the collapse of the Town Hall extension during the great Edinburgh earthquake of '78. Magdalen College was destroyed in the bombing of the Cherwell bridges, one of the opening incidents of the second European war, and Christ Church and Keble (to which the central Government had been transferred from London) suffered a similar fate a few weeks later in the general reprisals. The loss of Keble and the old Science Museum is held by art-lovers to be irreparable, but Christ Church has been rebuilt and the Cardinal's plan at

last completed, except for the new Tom Tower, which has only reached some 800 ft. and lacks the belfry stages and the lantern. The new business area, still known as 'The Barges,' with its impressive waterfront, arose from the sale of the Christ Church meadows during the hasty 'restriction of building land' Acts of the short-lived Levitsky Government of '83."

**Whitening of Churches.**

"THE Central Council for the care of Churches and Diocesan Advisory Committees," writes a correspondent, "are recommending the whitening of churches. This was the treatment adopted by the mediæval builders as the ground-work of all their colour schemes, and said to be the safest and best procedure in all doubtful cases. If anyone questions the beautiful effect it produced when done in a proper manner, the answer is to be found in Henry VII's Chapel, Westminster Abbey. Following upon the recent repairs to the vaulted roof the whole interior has been whitened in the way that we know the builders of Henry VII's own time treated it when it was first erected. The fairy lightness of it all, the lace-like delicacy of the vaulting, the play of light and shade and the shadows thrown by the light, prove the rightness of the ancient builders. Originally, no doubt, the bosses had rich colouring, and a beginning has already been made with the renewal of this. Probably it was the intention to gild and colour some parts at least of the roof, no doubt over the altar. Any restoration of this would to-day be conjectural."

**Brewer's Drawings of Old London.**

WE are glad to note that Dr. Inge, formerly Dean of St. Paul's, has resumed his Wednesday articles in the *Evening Standard*. It was of special interest to us to see that in the first of the new series entitled "London Jumble," which appeared last week, Dr. Inge said that "all lovers of London ought to know Brewer's drawings of the old City. In the sixteenth century it was one of the loveliest cities of the world, finer even than Oxford." Our readers will remember that Brewer's drawings appeared originally in *The Builder*, and have since been published in book form by us under the editorship of Mr. Herbert A. Cox, F.S.A.

**A Silver Sports Cup.**

THE sports cup which we illustrate on this page has been presented by the Court of the Worshipful Company of Goldsmiths to the Architectural Association, to be competed for by students of the A.A. School of Architecture. The design, by Mr. Herbert Tayler, was chosen as a result of a competition which was promoted to encourage good design in silver. The sculpture on the lid and the engravings on the cup were designed by Mr. John Burrell, and the cup was made by Messrs. Wakely and Wheeler.

SILVER SPORTS CUP PRESENTED BY THE GOLDSMITHS' COMPANY TO THE ARCHITECTURAL ASSOCIATION. Designed by MR. HERBERT TAYLER.

(See this page.)

**A Birmingham Handbook.**

THE City of Birmingham Handbook for 1935, just issued, is a worthy review of the civic administration of England's second city. It is of special interest in view of the fact that the present year marks the centenary of local government, as it is known to-day, the Municipal Corporations Act having been passed in 1835. During this century of years, Birmingham has developed from a straggling town "where manorial officers, including a steward, high and low bailiffs, two constables, a Leadborough, flesh and ale connors and twenty-four keepers and night constables still exercised their mediæval functions," to a city which has some claims to be regarded as the best-governed city in Great Britain. The Handbook is a most interesting record of the activities which justify that claim, admirably edited by Mr. W. S. Body, Chief Clerk in the Town Clerk's office. Divided into nineteen sections, every public, social and industrial activity is chronicled and often illustrated. Particularly interesting is the chapter on the City Estates, which at September 15 last comprised a total of 41,162 houses. Much of this great work has been completed under the direction of Mr. Herbert H. Humphries, whose forthcoming retirement from the City Surveyorship will be a great loss to the city. A second brochure received, traces the history of the Market Hall, which was designed by Charles Edge and reaches this year its centenary.

**The Machine.**

IT is clear to many thoughtful people that the whole truth has not yet been written about the machine; it is almost impossible to get an impartial and reasoned opinion upon the social, industrial and aesthetic consequences of the machine. It brought a train of ugliness and filth in its manufacturing processes, and the greed for wealth seemed to create a mind insensitive to beauty. These faults and failings are not easily forgotten, and prejudices die hard. Further, the distinction assumed between the tool and machine has seldom been fair or accurate, and most of us for many years have seen the anachronism that accepted many machine processes with complacence and rejected others on what seemed to be either a principle or merely prejudice.

**Subscribers to "The Builder."**

As many of our readers know, this journal will celebrate its centenary in a few years time, and while of course no one living has been a subscriber during the whole of the long period of the existence of *The Builder*, we are glad to mention that there are several readers who have been subscribing for more than half a century, one of whom writes to us this week: "I am pleased to state, having just turned 80, that I have taken *The Builder* for 60 years." Judging from letters we receive from time to time from representatives of the architectural profession and the building industry, we are glad to think that this journal is of service to young and old alike.

# GENERAL NEWS

### Professional Announcements.

Mr. Godfrey Samuel, A.R.I.B.A., will move his office on April 1 to 23, Haymarket, London, S.W.1. Telephone, Whitehall 2248. Trade catalogues and other communications should be sent to him at that address.

Mr. A. Bernard S. Fryer, A.I.A.A., Registered Architect and Surveyor, is now in practice at "Lynton," Barnston-road, Thingwall. Telephone : Upton 365.

### Architect's Estate.

The late Sir John Sulman, architect, of Sydney, left estate valued at £165,807.

### St. George's School, Windsor.

The recent restoration of St. George's Chapel, Windsor Castle, at a cost of nearly £250,000, is to be followed by the restoration of St. George's School, from which the chapel choir is recruited, at a cost of £8,000, which is being borne by Mr. F. A. Minter, C.V.O., of the firm of Messrs. F. G. Minter, Ltd., of Putney.

### Appeal for Peterborough Cathedral.

The Peterborough Cathedral Restoration Committee has launched an appeal for a total of £14,925 : £8,200 for work to be done at once, £4,725 for work to be done as soon as possible, and £2,000 to save the Minster Foregate from collapsing. £2,650 is required immediately to complete work already begun on the apse and retro-choir, and another £5,550 should be spent at once on the structure.

### Northamptonshire Panel of Architects.

A Northamptonshire Panel of Architects to advise local authorities on matters relating to new buildings and estate schemes has been formed in connection with the county branch of the Council for the Preservation of Rural England. This was reported at the first annual meeting of the County Council, when it was stated that the panel had already been called in to deal with two typical problems, one of which was connected with work being done at Corby.

### Surrey C.C. and Architects.

On the subject of the employment of architects by local authorities, the Surrey County Council have passed the following resolution :—"That this Council are unable to support the proposals made by the Royal Institute of British Architects that it should be made obligatory upon local authorities to employ qualified architects to design and superintend the erection of all public building works in cases where planning or appearance are matters of importance, and public authorities are either the building owners or provide financial assistance, and that the Ministry of Health be informed accordingly."

### Hampstead Town Hall.

The President of the Royal Institute of British Architects is to be asked to nominate three architects who have specialised in the repair and extension of public buildings to report on the present state of Hampstead Town Hall. From the three names submitted the Borough Council will select one, and the chosen architect will receive a fee of 100 guineas for preparing a report on the existing structure and suggesting how, if at all, the premises can be enlarged and adapted to the growing work of the staff. Meanwhile, the principal officers are to make suggestions as to how far the present hall serves and what additional room is required.

### Appointments Vacant.

Orpington U.D.C. invite applications for post of temporary building inspector at salary of £4 10s. per week. Applications, on forms obtainable from Mr. Leonard O. Wall, Clerk, Council Offices, Crofton Pound Hill, Orpington, by April 4.

Durham C.C. require an assistant clerk of works at £4 10s. weekly salary. Applications, on forms from Mr. F. Willey, F.R.I.B.A., Architect to Education Committee, 34, Old Elvet, Durham, by April 15.

Plymouth C.B. invite applications for posts of three temporary architectural assistants at salary of £300 per annum each. Applications to City Architect, Municipal Offices, by April 4.

Shoreditch B.C. invite applications for the position of a temporary technical assistant, with experience in the design of public buildings, at a salary of £6 6s. per week. Applications by April 8 to Mr. R. Cyril Ray, Clerk, Town Hall, Old-street, E.C.1.

Staffs C.C. require deputy architect to Staffs E.C. Salary, £500. Forms, returnable by April 12, obtainable from Mr. F. A. Hughes, Director of Education, County Education offices, Stafford.

# OBITUARY

### William Milburn, F.R.I.B.A.

We regret to record the death, at the age of 76, of Mr. William Milburn, F.R.I.B.A., of Sunderland. A memoir will appear in our next issue.

### James A. Williamson, A.R.I.B.A.

We regret to announce the death, in his 75th year, of Mr. James A. Williamson, formerly the City Architect for Edinburgh Corporation. Mr. Williamson entered the service of the city in 1880, and had the distinction of being among the first in Edinburgh to qualify, in 1884, for the title of A.R.I.B.A. He was made Deputy City Architect in 1898, and succeeded Mr. Morham as Principal City Architect in 1908, retiring in 1925 after 45 years' service. During Mr. Williamson's term as Principal, he designed many of the buildings in connection with Edinburgh's social services, such as Portobello Baths, the Central Fire Station, and many of the public wash-houses. He also designed and carried through the first post-War housing scheme at Gorgie, in which the houses were stone built. As a young man he, in association with Mr. A. Scott, won an open competition for the lay-out of the North Bridge, which, however, was not carried out.

# CORRESPONDENCE

### Stained Glass in Churches.

SIR,—As the writer of the article referred to by the Bishop of Bristol, I am interested in the letter from Major Athoe which appeared in your last issue. The glass in question would, in my opinion, add to the architectural value of many church buildings. It has been my experience that incidentals founded on sound art do harmonise, notwithstanding the period. I would regret the passing of stained glass in its highest manifestation, but I am compelled to admit the æsthetic merit of sculptured glass handled with the restraint of a sculptor duly imbued with a sense of architectural values.

MALCOLM MACKENZIE.

### Decay of Timber in Houses.

SIR,—We were interested in the address given by Mr. K. St. G. Cartwright on March 4, to the Chartered Surveyors' Institution, on the subject of "The Decay of Timber in Houses," which was of immediate interest to us. We think, however, that Mr. Cartwright will forgive us for drawing attention to what we consider a rather important omission on his part. In the last paragraph he deals with the case of solid floors and their treatment for the prevention of decay, and the omission relates to the use of coloured asphalt, which is now being extensively used in connection with housing and other schemes where a coloured floor is of advantage and is at the same time impervious to moisture and vermin.

The Ministry of Health have approved the use of coloured asphalt, and the material is being laid in many thousands of houses where solid floors, laid under the 1919/1921 Acts, have failed, but the existing surface is being replaced by coloured asphalt. The material is usually laid in one coat $\frac{5}{8}$ in. thick superimposed on a layer of specially prepared hair felt.

L. C. MARRIOTT, Manager,
The Limmer and Trinidad Lake Asphalt Co., Ltd.

# COMPETITION NEWS

### School Library, Pontefract.

Ackworth School, near Pontefract, Yorks, invite competitive plans for a small school library. The competition is open to members of the Society of Friends and old scholars of the school. Applications to be sent to the Bursar of Ackworth School, near Pontefract, Yorks, not later than April 16.

### Exchange Buildings, Teheran.

A prize of £750 will be awarded for the best plan submitted before June 1 for the erection of a Produce and Stock Exchange at Teheran. Architects and others interested may obtain full particulars from the Commercial Attaché to the Imperial Iranian Legation, Ling House, 10-13, South-street, E.C.2.

### New Municipal Offices, Swindon.

Swindon Corporation invite architects of British nationality, resident in the British Isles, to submit designs in competition for new municipal offices. Professor A. B. Knapp-Fisher, F.R.I.B.A., is assessor, and premiums of £350, £250, and £150 are offered. May 25 is the last day for questions, and August 31 is the closing date. Conditions, on deposit of £1 1s., from the Town Clerk, Town Hall, Swindon, Gloucestershire.

### New Central Offices, Hertford.

Hertfordshire C.C. invite architects to submit designs in competition for the erection of central county buildings at Hertford. Mr. Robert Atkinson, F.R.I.B.A., is assessor, and premiums of £350, £250 and £150 are offered. Designs are returnable by October 1. Conditions, on deposit of £2 2s., from the Clerk of the County Council, Clerk of the Peace Office, Hertford.

### New Council Offices, Sutton-in-Ashfield.

The Sutton-in-Ashfield Urban District Council are to hold a competition for new council offices, open to British architects in Nottinghamshire, Derbyshire, Leicestershire, Lincolnshire and Rutland. The assessor is Major T. Cecil Howitt, D.S.O., F.R.I.B.A., and the premiums to be offered are £200, £100 and £50. Conditions not yet available.

### Competition for Decorative Designs.

The Silicate Paint Co. (J. B. Orr and Co., Ltd.) are organising an open competition for students, apprentices or operatives of the painting and decorative trades, which will take the form of decorative designs of any kind whatever on panels. The panels when finished and mounted by the company are to measure 28 in. by 54 in., and the design is to be horizontal, not vertical. Cartridge paper in rolls 30 in. by 72 in. will be supplied to competitors on application; such rolls will be grounded in "Duresco" by the company with any colour selected by the competitor. The design is to be carried out on such ground with "Duresco" supplied by the company direct to the competitor. Entries should be in individual and not a firm's name. Prizes of £6 6s., £4 4s., £3 3s., £2 2s., and £1 1s. will be awarded. The winners' panels will be exhibited at the forthcoming Decorators' Exhibition, to be held by the National Federation of Master Painters and Decorators of England and Wales, at Blackpool, from October 2 to October 12, 1935. Messrs. L. Drinkwater, W. G. Sutherland, F.I.B.D., and J. G. E. Holloway, B.A., are the assessors. Panels must be delivered to the company at Charlton by August 1, and will become the property of the company.

### County Offices, Westmorland.

Westmorland C.C., as stated in our last issue, propose the erection of county offices at South Busher, Kendal, and now invite architects to submit plans in competition for the scheme. Mr. G. H. Foggitt, F.R.I.B.A., A.R.C.A., has been appointed assessor, and £200, £125 and £75 are offered as premiums.

Conditions are obtainable on deposit of £1 1s. from the Clerk of the Council, Exchange Buildings, Kendal, to whom questions may be addressed until May 2, and to whom

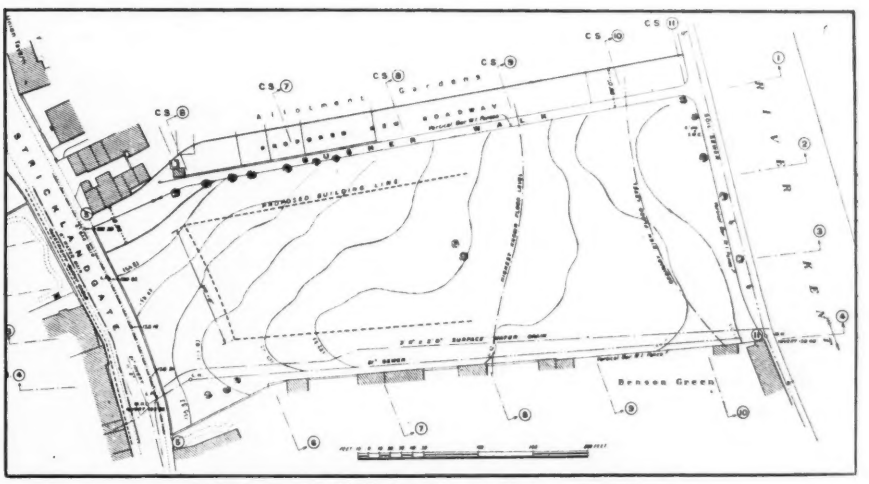
designs must be sent in by July 4. From the conditions the following points are taken :—

The promoters desire a dignified, simple and efficient building, planned on modern lines, expressive of its official character. Economy in planning, construction and upkeep should be carefully considered. Simplicity of internal communication and good lighting to all working rooms are essential. The main facade is to face Stricklandgate (see site plan on this page), and is to be complete in itself. This elevation should not exceed a ground and first floor in height, except in so far as a basement is considered advisable. Building is to be capable of extension behind main front portions. Internal partitions or dividing walls should be independent of main structure wherever possible, making possible rearrangement, a requirement which makes desirable a simple and regular fenestration. No restriction is imposed as to the design of the elevations except that they should be in harmony with the general characteristics of the district. Alternative schemes will not be allowed.

The whole of the site between building lines indicated on the site plan is available for building. There is no specified limit to such area on the north-east. Portion of the site between building line on S.W. and Stricklandgate is to be left open and laid out as approach to main entrance, with car park.

External walls where visible to be faced with local stone or stone suitable to locality. Roofs covered with Westmorland green slate. Floors, beams and stanchions to be fire-resisting. Ground-floor rooms minimum 11 ft. height. First-floor offices, minimum 10 ft. No public corridor less than 6 ft. wide. A condition is that schemes must incorporate an old oak staircase from Brougham Hall, of which dimensioned drawings appear in the conditions.

Accommodation required is (a) Council suite —chamber to seat 60 members, 10 officials and the Press; public gallery for 20, two committee rooms, etc.; (b) Clerk's department of 2,025 sq. ft.; (c) Surveyor's department, 2,900 sq. ft.; (d) Accountant's department, 1,115 sq. ft.; (e) Agricultural department, 700 sq. ft.; (f) Education department, 1,555 sq. ft., and library and book store, 1,800 sq. ft.: (g) Public Health department, 1,000 sq. ft.; (h) Public Assistance department, 1,660 sq. ft.; (i) Local Taxation office, 645 sq. ft.; (j) Rivers Inspector and Shops Inspector, 200 sq. ft. Also strongrooms, storage rooms (estimated at 600 sq. ft.), lavatories, and 650 sq. ft. for caretaker's quarters.




PROPOSED COUNTY OFFICES, KENDAL: SITE PLAN.

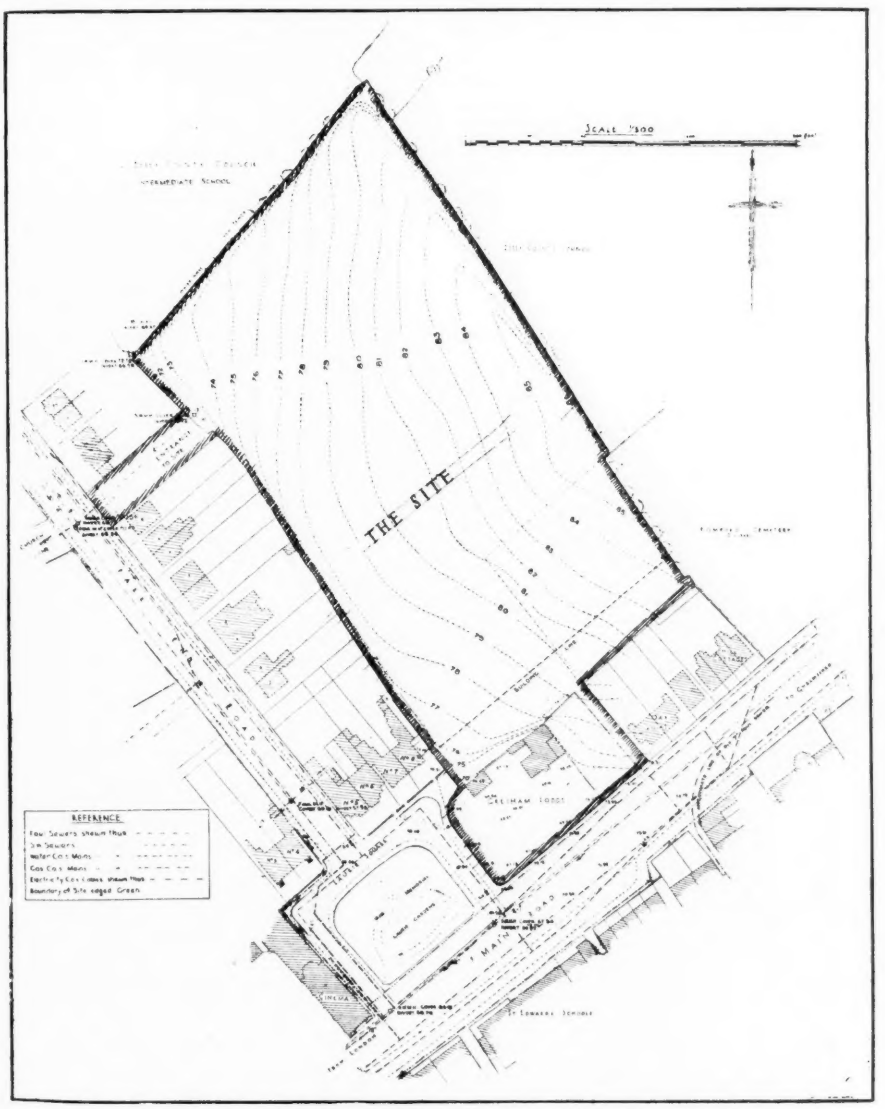
## Municipal Offices and Assembly Hall. Romford.

Preliminary details appeared in our last issue regarding the competition for plans for municipal offices and assembly hall, to be erected in Main-road, for Romford U.D.C. Mr. K. M. B. Cross, M.A., F.R.I.B.A., is assessor, and premiums of £250, £100 and £50 are offered. Conditions are obtainable, upon deposit of £1 1s., from the Clerk to the Council, Arcade Chambers, South-street, Romford, Essex, to whom questions may be addressed before April 30, and to whom designs must be sent by June 29.

The site plan is reproduced on this page, and the following points emerge from the conditions: Competitors should note that economy is of the greatest importance, that the question of cost will be one of the fundamental considerations in making the award, and that the building should be capable of future extension, and also of departmental rearrangement by the provision of independent internal partitions. A simple and appropriate expression of the purpose of the building is required in the elevations, the materials and character of which are left to competitors. Symmetrical and unsymmetrical plans will receive impartial consideration. The principal elevation should face Main-road. (See site plan.) The whole of the site, as indicated, is available, except that the building line must not project beyond the building line of the houses known as 5, 6, 7 and 8, Laurel-square. Mechanical ventilation is required for council chamber and hall. Acoustics of these and the committee rooms must receive special consideration in design and specification. The height of offices must be not less than 10 ft. in the clear.

The schedule of accommodation requires: (*a*) Council suite—council chamber to seat 30-35 members, 10 officials, 6 reporters and 6 clerks, totalling 1,200 sq. ft.; public gallery for 30; ante-room and chairman's room; two committee rooms *en suite*, totalling 800 sq. ft.; other accommodation: (*b*) Clerk's department —1,600 sq. ft. (*c*) Surveyor's department—3,110 sq. ft. (*d*) Accountant's department—2,650 sq. ft. (*e*) Medical officer of health's department—1,440 sq. ft. (*f*) Valuation department—570 sq. ft. (*g*) Town planning department—540 sq. ft. (*h*) Caretaker's quarters—650 sq. ft. (*i*) Basement and strong rooms—1,450 sq. ft. (*j*) Miscellaneous.

The assembly hall is to be used for lectures, concerts, meetings, dances, but not as cinema, nor is a fully equipped stage required. The hall must seat not less than 1,500, including a gallery. Two dressing rooms are required. A refreshment room of 800 sq. ft. is to adjoin the hall. The hall may adjoin and be contiguous to the municipal offices, or may be a separate building, but the offices must be self-contained.




PROPOSED MUNICIPAL OFFICES AND HALL, ROMFORD: SITE PLAN.

## CURRENT COMPETITIONS

| | Particulars published in "Builder." | Sending in date. |
|---|---|---|
| Monument in Cornish granite, for Cornish Quarry Masters' Assn. Prize, £50. Jury of assessors | Feb. 1 | April 8 |
| Laying-out an area of Central Croydon as extension of the Civic Centre. Dr. T. Adams, F.R.I.B.A., assessor. Premiums of £500 and £350. Conditions, dep. £1 1s., from Town Clerk, Town Hall, Croydon | Nov. 9 | April 30 |
| Police station, dwellings and hospital, Bishopsgate, for City Corporation. Mr. H. Austen Hall, F.R.I.B.A., assessor. Premiums: £250, £100 and £50 | Feb. 15 | May 31 |

# ARCHITECTURAL WORK OF H.M. OFFICE OF WORKS

## LECTURE TO SOUTH WALES ARCHITECTS AND BUILDERS.

UNDER the auspices of the South Wales Institute of Architects (Central Branch) and the Institute of Builders (South Wales Branch). Mr. J. G. West, O.B.E., F.R.I.B.A., gave a lantern lecture entitled "Some Aspects of the Architectural Work of H.M. Office of Works" on Thursday, March 21, in the lecture theatre of the Engineers' Institute, Park-place, Cardiff. Mr. John Williamson, A.R.I.B.A., Chairman of the Central Branch of the South Wales Institute of Architects, presided over a large and representative audience.

The lecturer said that before he dealt more particularly with his subject they might wish to hear something of the organisaion which was maintained by the State to deal with Royal Palaces, Post Offices, Employment Exchanges and many other types of buildings, of which examples existed not only in every town in this country but also in a large number of cities abroad. Mention of a Surveyor or Comptroller of the King's Works could be found as early as Edward I, and it was interesting to note that the first official architect who carried out public works on a large scale was Inigo Jones, who, although a Londoner by birth, had a good Welsh name. He was Surveyor to the King from 1615 to 1648. The staff of the Office was reorganised in 1662, and the office of Surveyor was held by that giant among men, Sir Christopher Wren, from 1705 until 1718. During that period the office of Comptroller was held by Sir John Vanbrugh. Among the names of other distinguished architects who held office under the Crown were those of Hawksmoor, Colin Campbell, William Kent, Robert Adam and Sir William Chambers.

The Office of Works as we knew it to-day dated from 1852, when a Board of Commissioners was constituted. It was impossible in the time at his disposal to give a clear picture of the responsibilities which were borne by the First Commissioner, but it might be said that many of the functions that would be exercised by a Minister of Fine Arts, if we had one, were now exercised by the First Commissioner of Works.

The work of the Department consisted, broadly speaking, in the provision, furnishing and maintenance of buildings for the administration of the public services in this country and abroad and the maintenance of the Royal Parks. The general direction of policy, financial control, and the co-ordination of the various executive and advisory divisions, were in the hands of the Secretariat, under the First Commissioner, and the Permanent Secretary.

### Architects' Division.

Passing to the largest of the executive divisions, the lecturer said it was controlled by the Chief Architect, and comprised architects and structural engineers, who were entrusted with the design and erection of new buildings and the preservation and maintenance of Ancient Monuments and Historic Buildings. The work and organisation of the Architects' Division would be referred to in detail later, but in order to show that the proper functioning of the machine which produced new buildings was the result of the combined efforts of a team, each member pulling his due load, he would describe in a few words the duties of four of the other technical divisions.

### Maintenance Surveyors' Division.

Next in point of numbers to that of the Chief Architect was the division controlled by the Chief Maintenance Surveyor. Some idea of the importance of this section of the staff might be gathered from the fact that the number of completed buildings at present under the charge of the Chief Surveyor was approximately 6,000, exclusive of Ancient Monuments, and of that number 1,000 had been added during the last ten years. The Chief Surveyor was responsible for the maintenance of buildings and the carrying out of small works of adaptations which did not involve architectural considerations. These and other activities of the surveyors enabled the architects to concentrate upon their one great concern—the production of new buildings. He wished to emphasise the last point because it was contended that the divorcement of new building work from maintenance had not only resulted in more economic and efficient methods of maintenance, but had tended also to improve the quality of architectural design. The existence in the Department of the Maintenance Division, always in close contact with the architects, meant also that the design of new buildings was governed in a great measure by considerations which arose directly from the experience gained by the maintenance surveyors in the course of their normal duties. To illustrate the effect of that system he might mention that when asked why so many of our smaller buildings, such as Employment Exchanges, were still being designed in the traditional manner, with pitched roofs, covered with tiles or slates, his answer was that in the experience of the Department the pitched roof in such cases had proved to be less costly in initial construction as well as in subsequent maintenance.

The division controlled by the Chief Mechanical and Electrical Engineer undertook the design and installation of heating, lighting and ventilating systems and the provision of lifts in new buildings, and was responsible for the maintenance of engineering services in buildings in the charge of the department with certain exceptions in the case of Post Offices.

### Quantity Surveyors' Division.

The next of the Technical Divisions was that which under the Chief Quantity Surveyor undertook the measurement and adjustment of all variations on building contracts; also the preparation of preliminary estimates for the larger new buildings. Approximate estimating had been specialised in that division, and the rates per foot cube upon which those estimates were based were expected to be within 5 per cent. to 10 per cent. of the accepted tender. Bills of quantities for new buildings were generally prepared outside the department by a practising quantity surveyor, selected in rotation from a panel consisting of about 80 members.

### Supplies Division.

The Controller of Supplies was responsible for the supply and maintenance of furniture, and for a section of the equipment for the buildings of the department. Much of the furniture was of a standard character, but in the case of large and important public buildings the architect was called into consultation and advised as to the general character of the furnishings.

### Building Schemes: Official Procedure.

They might now be interested to hear something in regard to the stages through which a normal building scheme passed before the work at the site was commenced by the contractor. The buildings varied greatly in character and size, but in view of the magnitude of the programme and of the need to conform to certain departmental principles, all schemes in their development followed, as closely as circumstances permitted, a procedure which had become established after very lengthy experience. The considerations governing the preliminary stages which included site acquisitions and the preparation of sketch plans, were familiar to all architects, and he would, therefore, pass at once to contract procedure, a subject in which all parties to a contract, the building owner, the contractor and the architect, were vitally interested. All schemes were submitted to the Board and, after approval was given, working drawings were commenced and, on completion, bills of quantities were prepared and invitations to tender issued. It was the normal practice to advertise for tenders, but recently in some parts of the country and in London the lack of response on the part of the contractors had not been productive of satisfactory results, and in a large number of recent cases the department had resorted to the system of invitation to a relatively small number of selected firms. A continuance of that closed system of tendering would depend entirely upon circumstances. It was now usual for the department to invite contractors to state the time they required to complete the work for which they were tendering, and that became an important factor in the selection of a firm, both time and price being taken into account.

In all the larger cases a time and progress schedule was agreed between the architect and the most favourably placed tenderer before a tender was accepted, and although the system must still be regarded in some respects as experimental, it was confidently expected that in due course the use of the time and progress schedule would become the rule for important works, thus leading to more economic and expeditious methods of building with advantage to the building owners, contractors and architects.

### Design and Construction of New Buildings.

Dealing with "the most important section" of his subject—"The Design and Construction of New Buildings," the lecturer referred to the distribution of staff and services. The greater part of the programme, he said, consisted of new building work of a highly specialised character, and this was being dealt with by groups of architects whose activities were controlled by the three senior architects, each directing a group, and who themselves also undertook the design and execution of a number of the most important buildings. One of the senior architects acted also as deputy to the chief architect in the general control of all matters with which the division was concerned. The senior officers were thus organised in distinct tiers, architects and senior architects, under the chief architect, and each of the officers who occupied those positions of responsibility was a professional man who joined the Office of Works after a period of training outside, and who after many years of service within the department obtained promotion under conditions of keen competition.

The unit of the division was the Architects' Branch, with the architect at the head assisted sometimes by two and sometimes by three assistant architects controlling a staff of architectural assistants who numbered about 14 in the average branch, the number varying with the volume of work in hand. The distribution of the staff was such as to ensure that individuals were engaged upon work which their qualifications best fitted them to undertake. As knowledge and experience were gained the men advanced to work of a higher class, the system being one which, in spite of what was often alluded to as Civil Service "red tape," afforded every technical officer entering the Board's service at a reasonably early age, recurrent opportunities to improve his status.

Each of the officers comprising the senior staff entered the department as a temporary assistant in early manhood, and it was due firstly to enthusiasm for the great art of architecture, and, secondly, to a proper understanding of his position as a servant of the State, that each had advanced to a position of responsibility. In a sense the Office of Works was the greatest architectural club in the world, and he hoped the day would never arrive when the team spirit would cease to operate.

Referring to standards of construction and architectural design, the lecturer said all building schemes undertaken by the department were exempt from the by-laws of local authorities, but considered broadly the standard of construction adhered to the stipulations of the London Building Act. Departures were made when considered desirable in the interests of economy or to admit of the ultilisation of improved methods of construction. Standardisation of construction had been effected to a considerable extent, and had been brought about by the use of standard specifications supplemented by drawings relating to various details of construction. The principles of design, on the other hand, were laid down by the chief architect, who approved each design and the materials to be used in the architectural treatment both ex-

ternally and internally, having regard to the special requirements of any particular building scheme. The standard specification and drawings were kept continuously under review with the aid of maintenance surveyors.

It would be appreciated that the close study of materials and forms of construction played an important part in the consideration of questions of architectural design. He desired, however, to emphasise that any tendency towards uniformity of architectural design was looked upon as a condition which must be strenuously resisted, the aim being to impart some measure of distinction and architectural quality to even the smallest of buildings.

New forms of construction were always investigated, but in view more particularly of their responsibilities as regards the public purse, a reasonably safe policy was followed, and they were not adopted to any great extent until experience had shown that some advantage would accrue. When it was clear that a new system of construction or type of design would meet particular conditions at least as appropriately as the old practices, the Office of Works did not hesitate to operate that system. Indeed, the Office of Works might claim to have been amongst the pioneers in erecting, 30 years ago, the great extensions to the General Post Office in the Hennebique system of reinforced concrete, and 14 years ago the Ministry of Pensions building, Acton, in a concrete block and light steel construction. Both buildings were amongst the largest in their class, and their execution must certainly be regarded as great-scale examples of new systems of design.

Generally, it might be said that in recent years there had been a tendency towards the simplification of design with a more sparing use of costly materials. Features serving purely æsthetic purposes had been discarded except in special instances, and architectural character had been sought by care in the selection of material and by the exercise of judgment in the shaping of the parts and of the buildings as a whole, and in the application of established principles governing scale and proportion. He had no hesitation in saying that Government buildings were now planned on much more economical lines than formerly.

In offices the open fireplace had been almost abandoned, halls and staircases were no longer so spacious, while corridors of reduced width were generally double banked with rooms. The height of rooms, even in the largest office buildings, had been reduced to an average of about 11 ft. 6 in., and the measure of economy effected would be appreciated when this 11 ft. 6 in. dimension was compared with the 14 ft. headrooms provided in Government buildings such as the War Office erected in Whitehall prior to the war.

The constant aim was to provide a structure which would be in harmony with its surroundings, with generally a simple brick treatment for the exterior where good facing bricks were obtained locally, a stucco facing in some of the small towns on the South Coast, where that material had in the past been largely employed, and occasionally an all-stone treatment, as in the Rutlandshire town of Stamford. Those principles had not led to uniformity of treatment, but rather to architectural expression which, while paying heed to the past, had also provided great scope to the designer in regard to both the disposition of the various elements in design and in the use of materials. Speaking broadly of that question of design, his belief was that much good had resulted from some of the methods of the modernists and from a widespread recognition in recent years that architectural quality did not necessarily depend upon the unrestrained employment of architectural features of past generations. But he did not see in that any argument for the abandonment of long-established forms of fenestration, or of wall surfacing, or types of roof covering which to-day fulfilled their purpose as adequately as at any time in the past. In the matter of fenestration on an obstructed site, the placing of the window head at the highest possible level was of much greater importance than the lateral extension of the glass, and that, as much as any æsthetic or structural consideration, had resulted in the retention in Office of Works' designs of window shapes employed by our forebears.

In considering that highly contentious subject of architectural design, he sometimes felt that what had been said by an eminent divine in connection with another human interest might be equally applicable to the mistress art of architecture: "There are no beginnings and no endings in architecture—we are flowing down a river. The war and other happenings have made great changes, and we in this generation have come to rapids. But it is the same river, and human nature does not change appreciably."

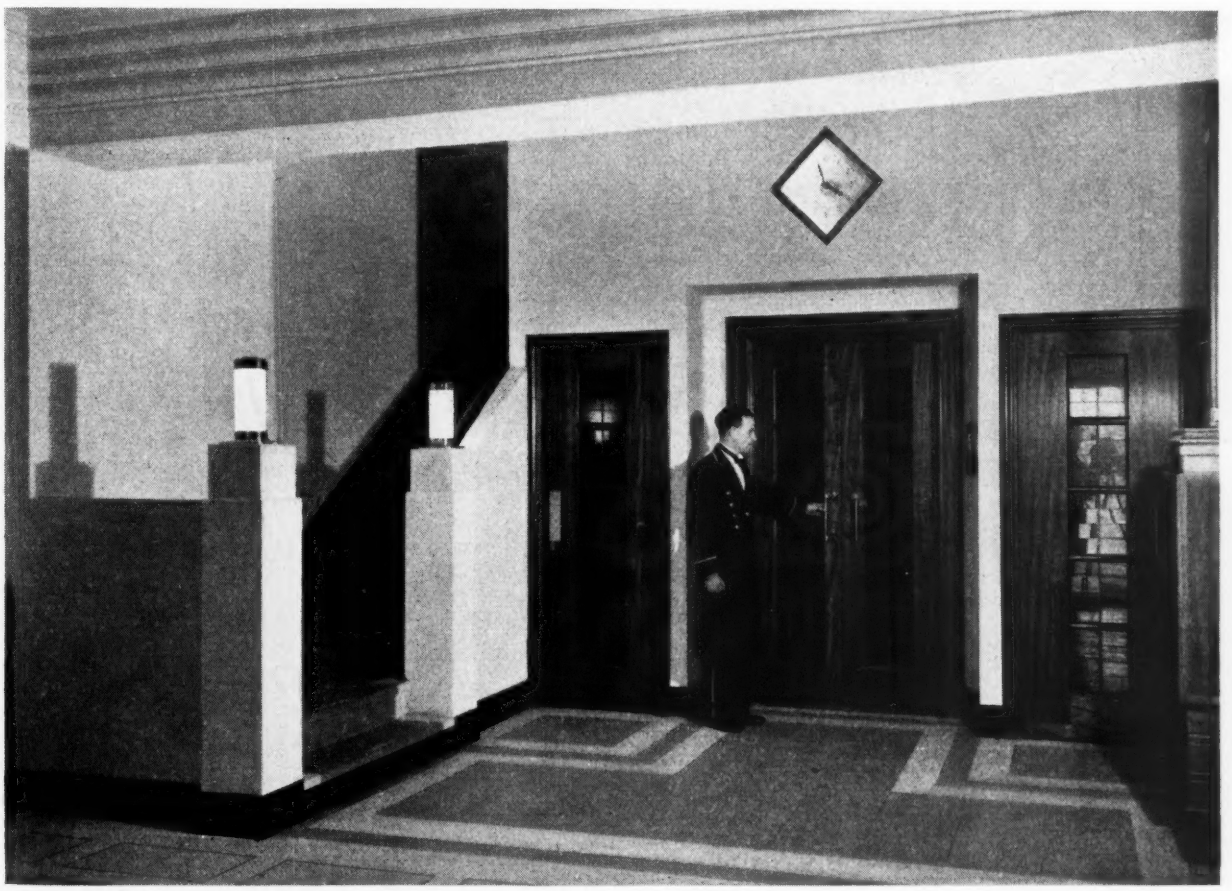
That he believed to be profoundly true of their art, the great art of architecture, which was neither engineering nor decoration, nor that which it sometimes seemed to be in danger of becoming—a combination of both—and if the views he had expressed were accepted, we must seek inspiration from the past in providing the buildings of to-morrow, placing due value on both tradition and function.

### Employment of Outside Architects.

Before proceeding to show on the screen buildings of the Office of Works' architects, the lecturer referred briefly to works which had been designed for the Department by architects in practice. These included the largest and most important of the buildings, and amongst those dealt with by outside architects in recent years were: Extensions at the British Museum and the Tate Gallery; the new Government Buildings and Parliament House of Northern Ireland; the Speaker's residence, Ulster; the new Embassy, Washington; and the proposed new Government Offices, Whitehall; National Library of Scotland, and Government Offices, Edinburgh. In those cases the Office of Works was in the position of the building owner, and the selected architect conformed to the general procedure of the Commissioners in much the same way as do the architects of the Department.

The Board's chief technical advisers were naturally in close and constant touch with those practising architects, but the relationship was such that in all matters of architectural design the responsibility rested entirely with the practising architect, a frank recognition of the feeling that the Government expected the buildings to be in the architectural manner of the appointed architect being the governing consideration in the association.

Mr. Percy Thomas, in seconding the vote of thanks, proposed by Mr. W. S. Purchon, M.A., expressed the great pleasure felt by himself and other local architects and builders in hearing such an informative address from a Cardiff boy who had risen to the position of Chief Architect to H.M. Office of Works.



"CROMPTON COURT," FULHAM ROAD, S.W.: Entrance Hall.
MESSRS STANLEY PEACH AND PARTNERS, Architects. (See page 597.)

# THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

## THE WORK OF MESSRS. SMITH AND BREWER.

A PAPER on "The Work of Messrs Smith and Brewer" was given by Mr. Henry M. Fletcher, M.A., Hon. Secretary of the R.I.B.A., at a meeting of the Institute held at 66, Portland-place, W., on Monday evening, when the chair was occupied by the President, Sir Giles Gilbert Scott, R.A.

The lecturer said that at a time like this, when so much was in the melting-pot that few could say certainly what they admired or what they were after, when ideas and ideals in architecture were changing so fast that none could foresee whether posterity would have one kind word for what this age was bringing forth, it was good to spend a little time in looking back at the immediate past and taking stock of its results. There were many contemporaries and friends of Arnold Dunbar Smith and Cecil Brewer who held their work to be the most distinguished architectural output of the early twentieth century in this country. It was less widely known than that of other men who were practising at the same time, and far less widely than it should be. There were in London only three buildings which could be pointed out from the street as designed by them—first, the Mary Ward Settlement, originally Passmore Edwards Settlement, in Tavistock-place, brilliant in promise but immature; next, the additions to the town house of the Bishops of Ely in Dover-street, which converted it into the Albemarle Club—this had a brick front which gave distinction to Berkeley-street until it was spoiled by alteration; and third, Messrs. Heal and Son's premises in Tottenham Court-road, which in itself for most Londoners summed up all they knew of Smith and Brewer's work.

It was natural in considering the work of partners to ask how much was due to one and how much to the other, but if the partnership was a true one the question could not be answered except in general terms of temperament, and to such terms any answer which he could attempt must be restricted. Two men of markedly different types found the means of fusing their separate gifts in the creation of works of architecture. The result was given to the world as the work of Smith and Brewer, and that was literally and exactly what it was. The fusion was so complete, and the contribution of each, where it was not identical in kind—and in a real partnership there must be a large identity of view—was so truly complementary to that of the other, that he was convinced that the work of the two was finer than either could have produced alone.

The one exception he would make to the hesitation he felt about distinguishing their individual contributions was the Cardiff Museum. Here the disposition of the reserve galleries, which probably won the competition, originated with Dunbar Smith. That was known to their friends at the time, and was freely acknowledged by Brewer, while Smith characteristically refused to claim sole credit for the design. Nor did he (the speaker) even distinguish the later work of Dunbar Smith from that which they produced together. The survivor, whichever he be, of a partnership that had lasted over twenty years could not be unaffected by what had gone before. It was true that in that later work, such as the buildings at Armstrong College, Newcastle, or the Cambridge Lecture Rooms, there was a more direct solution of the problem, an absence of the tendency, noticeable in the earlier joint work, to play with subtleties of plan-form, to introduce frequent points of interest. But that might well be due to one or both of two causes, the need for strict economy to suit post-War finance, and the trend towards austerity which was seen in the maturer output of many artists. Had Brewer been the survivor he might equally have developed in the same direction. Their output, though considerable, could not be called large—indeed, work such as theirs could not be produced in bulk—and the quality was so consistently high that the task of choosing examples to illustrate a short paper was bewildering.

The partnership started, and with it the work, or at any rate the considerable work of each of the partners, with the Passmore Edwards Settlement in Tavistock-place. This was a competition, with Norman Shaw as assessor. There were men of experience and reputation against them, and the result was a surprise. Smith and Brewer had both been residents in the settlement in its old quarters, but their success showed not only the advantage of familiarity with the needs of the institution, but the still greater importance of being better architects than the older men. The year was 1896.

The years from 1890 to the War were a period of great activity in the building of country houses. Ernest Newton, Macartney, Lorimer and many who are still alive were doing work which was eagerly studied abroad and raising our architectural credit to a peak which it had not often reached. In that good company the names of Smith and Brewer stood high, stood, indeed, with the highest. Their country houses, to be found mostly in the home counties and East Anglia, had an individual flavour, but it was never exaggerated into eccentricity; they were based on tradition but never archaistic; and there was always a touch of novelty in planning and detail, a reasonableness and an elegance which saved them from vulgar exuberance on the one side and from the equally bombastic and much more self-conscious quality known as starkness on the other. Their work had a gaiety, an enjoyment in what they were doing which came from mastery of planning, design, and the use of materials. That mastery was largely due to their early training in the Arts and Crafts movement, and their familiarity with its leaders, particularly Lethaby, who was interested and delighted by their success with the Passmore Edwards Settlement. In domestic work the influence of the client was looked upon with suspicion by some architects, with neglect by others. Smith and Brewer never made that mistake. They met the client half way and took him into something like partnership.

Meanwhile came commissions for town work of a semi-public character, or at least on a more than domestic scale, which were good training towards the larger kind of design needed later in the museums. The premises of Messrs. Heal and Son were well known, and among the rowdy, tatterdemalion buildings of Tottenham Court-road they held the attention like a rhythmic ceremonial pageant, with a rhythm of threes and fives boldly and subtly maintained across and up and down the façade. That was one of the first shop-fronts in London where the windows were recessed under shelter; the recession was recalled in the third story, while the first and second were linked by lead panels decorated in colour with trade emblems. The marble facing of the ground-floor piers and shop fascia was proclaimed as a veneer by the decorative bronze pins which fastened it to the structural work. A true designer would always jump for joy at a difficulty and turn it into an opportunity.

For the work at the Albemarle Club the keynote was set by the existing house, an accomplished piece of eighteenth-century design by Sir Robert Taylor. The additions were made with great sympathy and no copying—it was impossible to mistake Smith and Brewer's work for Taylor's, but one passed from the one to the other without a jar.

Mention should be made of a responsible commission which came to them in early years, the reconditioning of Wren's Sheldonian Theatre at Oxford. There was much repair to be done, and much replanning, for the theatre was a dangerous fire-trap. The work was done with a conscientious reverence for Wren, which left few traces behind, but the commission to deal with a building of such historic and national interest showed the growing confidence which they inspired.

Referring to the post-war work of Dunbar Smith, the lecturer mentioned first the Library of Armstrong College, Newcastle, which was won in competition. It was noteworthy how seldom, if ever, they entered a competition without winning it. That was a bright spot among the ill-grouped and mediocre buildings of the College. Its charm spoke for itself, and it was carried out with such scrupulous care for every detail of its use that visiting librarians had called it the library they had dreamt of. The success of the library led to other buildings for Armstrong College, the most important of which was the Students' Hostel, a dignified brick building grouped round an open quadrangle.

Referring to the Cambrige University Lecture Rooms in Mill-lane, Smith's last completed work, the lecturer said that the front, in a narrow street, was a scholarly piece of plain brickwork of Georgian type. For the interior, good speaking and hearing were the motive, acoustic shapes and materials were the stuff of the design. The library was a further development of the Armstrong reading room.

The National Museum of Wales was one of the great buildings surrounding Cathays Park, with which Cardiff had shown the way in civic grouping to all other cities in these islands. It was in line with the Town Hall and the Law Courts, the brilliant work of Lanchester and Rickards, which were already built at the time of the Museum competition, and it formed with them the leading trio of the whole group, facing south from the Park to the town. The transition from Justice to the Muses, from Lanchester and Rickards to Smith and Brewer, was skilfully and urbanely done; no attempt was made to follow the earlier buildings in style or in detail—indeed, had such an attempt been made the result must have been forced and unnatural, owing to the difference of purpose in the buildings and of temperament in the architects—but community of service had been subtly acknowledged by a sort of bow and curtsey across the street.

The Fitzwilliam Museum at Cambridge presented a formidable problem. The old building was not a masterpiece; there must be something wrong with a storehouse approached by a Corinthian portico facing north-east and costing, at a guess, not less than the building behind it. But the portico itself, granted that it faced the wrong way, and judged by classic standards, was a masterpiece and a splendid preface to Cambridge as one came in by the Trumpington-road from London. Circumstances dictated for the new scheme an independent building, designed with the fullest recognition of the requirements of a modern museum, set side by side with the old Fitzwilliam but not in contact with it, the two connected unobtrusively by a gallery towards the back. The frontage line was kept back and the treatment, though much simpler, was in the same school of design as Basevi's Museum.

The word which to his mind summed up the architectural qualities of Smith and Brewer's work was "classic," if one used it not in its historical but in its spiritual sense, implying the untiring search for proportion and perfection. All through their work one felt that the purpose and the use of the buildings came first and dictated the main lines of the design, and that those main lines were preserved unwaveringly through all the working-out. There was no surer indication of the classic spirit than the refusal to be tempted into side-paths by the fascination of incidentals; it was perhaps peculiarly difficult for Englishmen, but only that faculty of refusal could insure clean design. At the same time every relevant incident would be worked over and polished till it dropped easily into place in the scheme.

That might seem to be dry praise, nothing more, indeed, than a statement of what every serious architect aimed at. It was, anyhow, a

difficult aim, a high ideal, and by intense concentration and love of their art Smith and Brewer came nearer to realising it than most of their contemporaries.

He could not close without a word about the two men themselves. When Brewer died, Dunbar Smith wrote : "It is certain that he had a genius for making friends, and that his personality impressed those even who scarcely knew him, so that very many will mourn him and feel that his death has removed one of the vital influences of present-day architecture." And after Dunbar Smith's death a friend wrote : "His unconquerable modesty endeared him to his friends and his clients, but prevented him from receiving the fame and the honours which were his due. He was a delightful companion, full of humour and shrewdness, without a particle of jealousy. To his friends he was a true friend; people turned to him for advice in any architectural or private difficulty, and a word of commendation from Dunbar Smith was praise indeed, because of his complete sincerity." His (the lecturer's) long friendship with Arnold Dunbar Smith and Cecil Brewer was to him, as he knew it was to every one of their friends, an honour, an inspiration, and still more a delight.

### Discussion.

Mr. W. Curtis Green, R.A., who proposed a hearty vote of thanks to Mr. Fletcher for his paper, recalled his early meetings with Smith and Brewer at the end of the last century in a restaurant in Chancery-lane, where a small company of young architects used to lunch. Cecil Brewer was the brightest of the company, bubbling over with vitality and good fellowship; Dunbar Smith was shy, exact and shrewd; Cecil Brewer a 6B pencil man, Dunbar Smith a 6H. The one was complementary to the other, and the partnership between them was ideal, and more fruitful than any other of its time. Both were in deadly earnest; both reverenced their art and its great traditions. Fresh and original as their work was, they held fast to and treasured the high thought and great emotions of a traditional art.

Mr. A. H. Lee (Secretary of the National Museum of Wales), in seconding the vote of thanks, said Mr. Brewer unfortunately passed away in the early days of the building operations on the National Museum, but he (the speaker) was fortunate in enjoying the friendship of Mr. Dunbar Smith from 1910 until his death 24 years later. All those concerned with the museum realised their good fortune in falling into the hands of so brilliant yet so modest and unassuming an architect as Dunbar Smith, and upon the completion of each block of the museum a resolution was passed by the council placing on record their indebtedness to the architect for his exceptional services. The council also selected a suitable stone in a prominent position in the building on which to record the names of the architects, but Dunbar Smith was so modest that he chose instead a position round the corner where no one was likely to see it. The firm of Smith and Brewer was a great one, and had left memorials of its genius in widely scattered parts of the country. It was now in the safe keeping of Mr. J. A. Meikle and his partners. The museum authorities continued to have the happiest relations with the firm, and the sooner they could get it busy on an extension of their buildings the better they would be pleased.

Mr. J. A. Meikle referred to his long association with Dunbar Smith and Cecil Brewer, and said that nothing could have been more delightful or more beneficial to him than that association.

Mr. Frank Lishman spoke of the debonair and blithe feeling noticeable in the work of Smith and Brewer, a feeling rare in architectural work and arising, he thought, from the exceptional personality of both architects. One was always struck by what seemed the smooth and easy charm of their architectural treatment, which was achieved in spite of the extremely complicated requirements which they had frequently to meet. Smith and Brewer, moreover, inspired a great sense of loyalty in their staff.

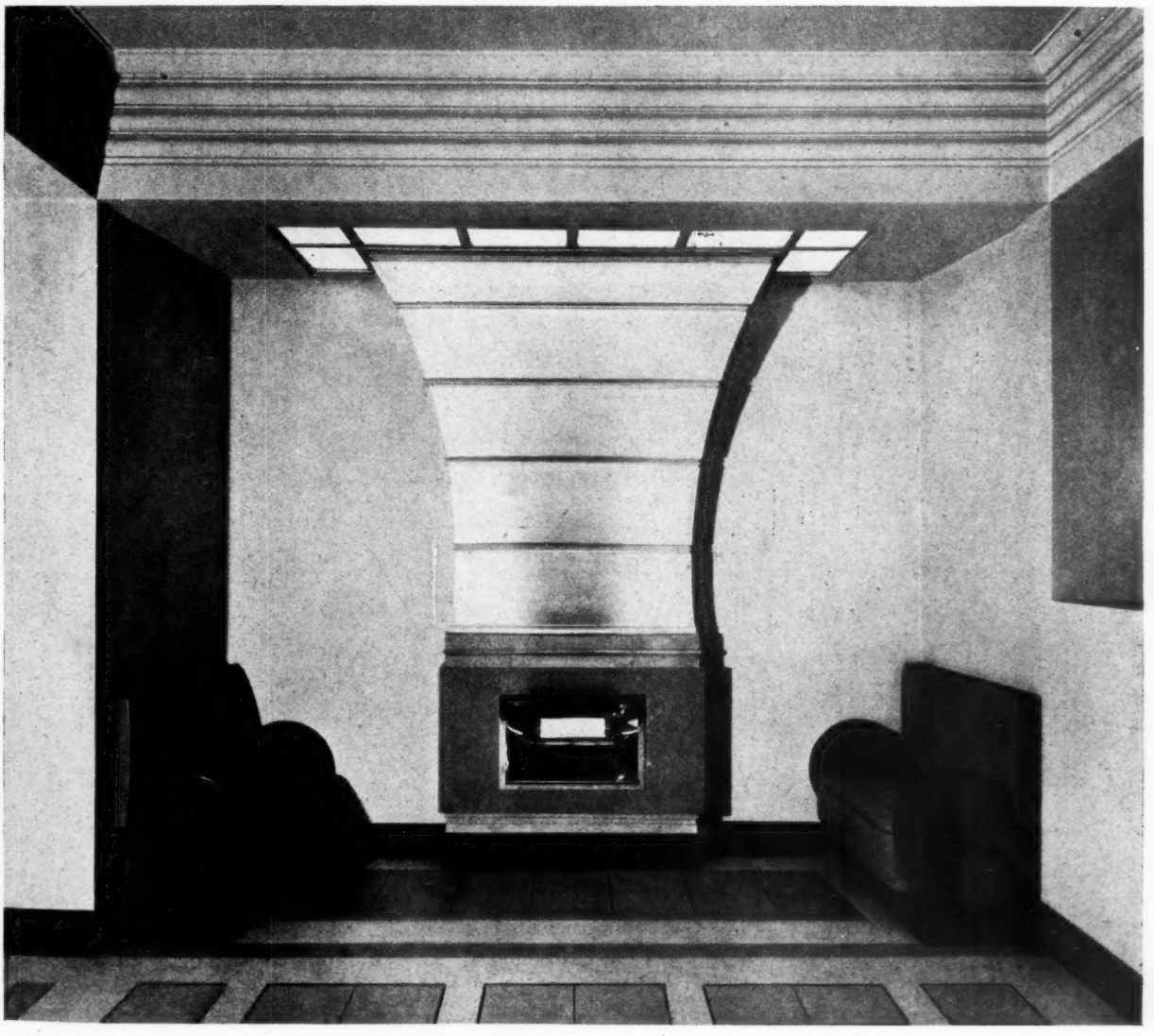
Mr. Francis Hooper drew attention to the unfortunate treatment of the open space in front of the magnificent public buildings in Cardiff. There were obviously, he said, opportunities for great improvement in that direction, and he hoped the Corporation might be induced to commemorate the Jubilee Year by arranging a different lay-out. There was water close at hand, and the opportunity seemed to present itself for a beautiful lay-out with a foreground of water in which the buildings would be reflected.

Mr. S. K. Greenslade, as one who had been a friend of Dunbar Smith and Cecil Brewer from their early days, paid a tribute to Mr. Fletcher's paper; it would be impossible, he said, to have a better description of their work, of the part which each one took in it, and of the wonderful friendship which existed between them.

Mr. Fletcher briefly replied.

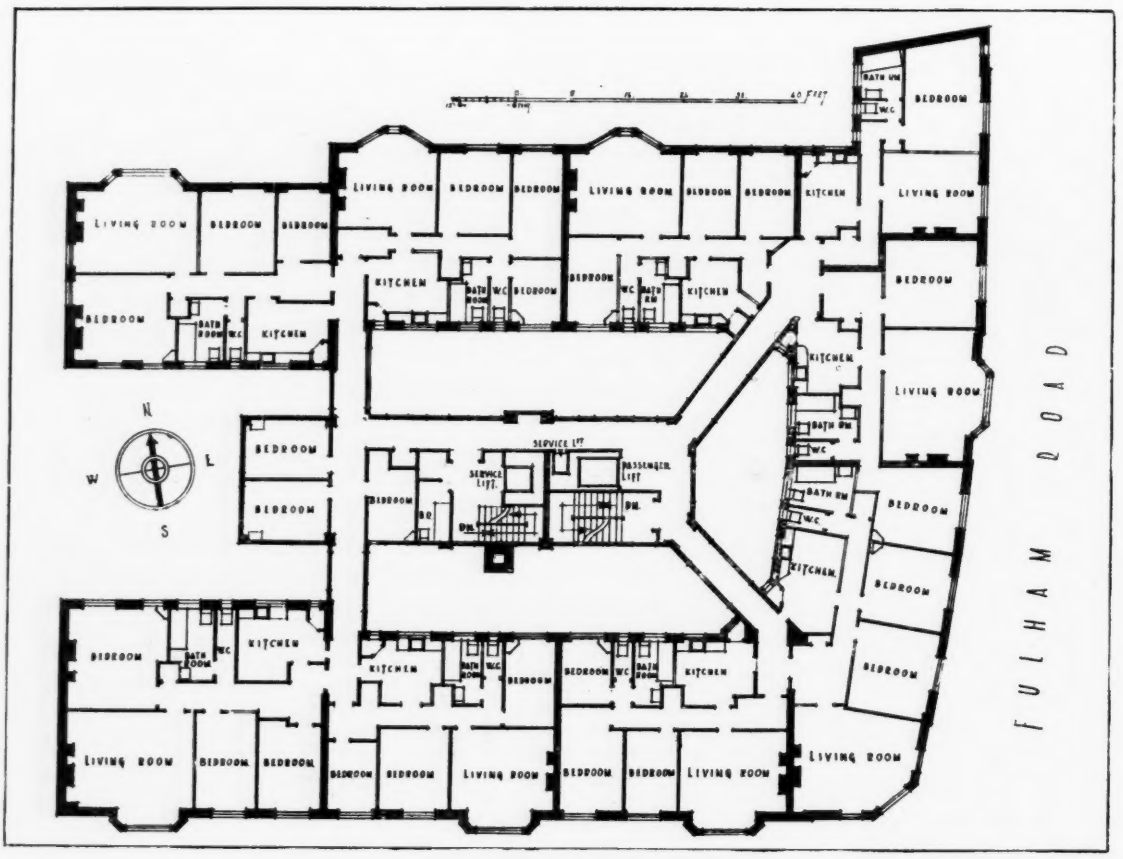
### R.I.B.A. Intermediate Examination.

Following are the dates on which the forthcoming R.I.B.A. Intermediate Examination will be held :—May 24, 25, 27, 28 and 30. (Last day for receiving applications : April 24.)



"CROMPTON COURT," FULHAM ROAD, S.W.: Entrance Hall Recess and Fireplace.

MESSRS. STANLEY PEACH AND PARTNERS, Architects. (See page 597.)



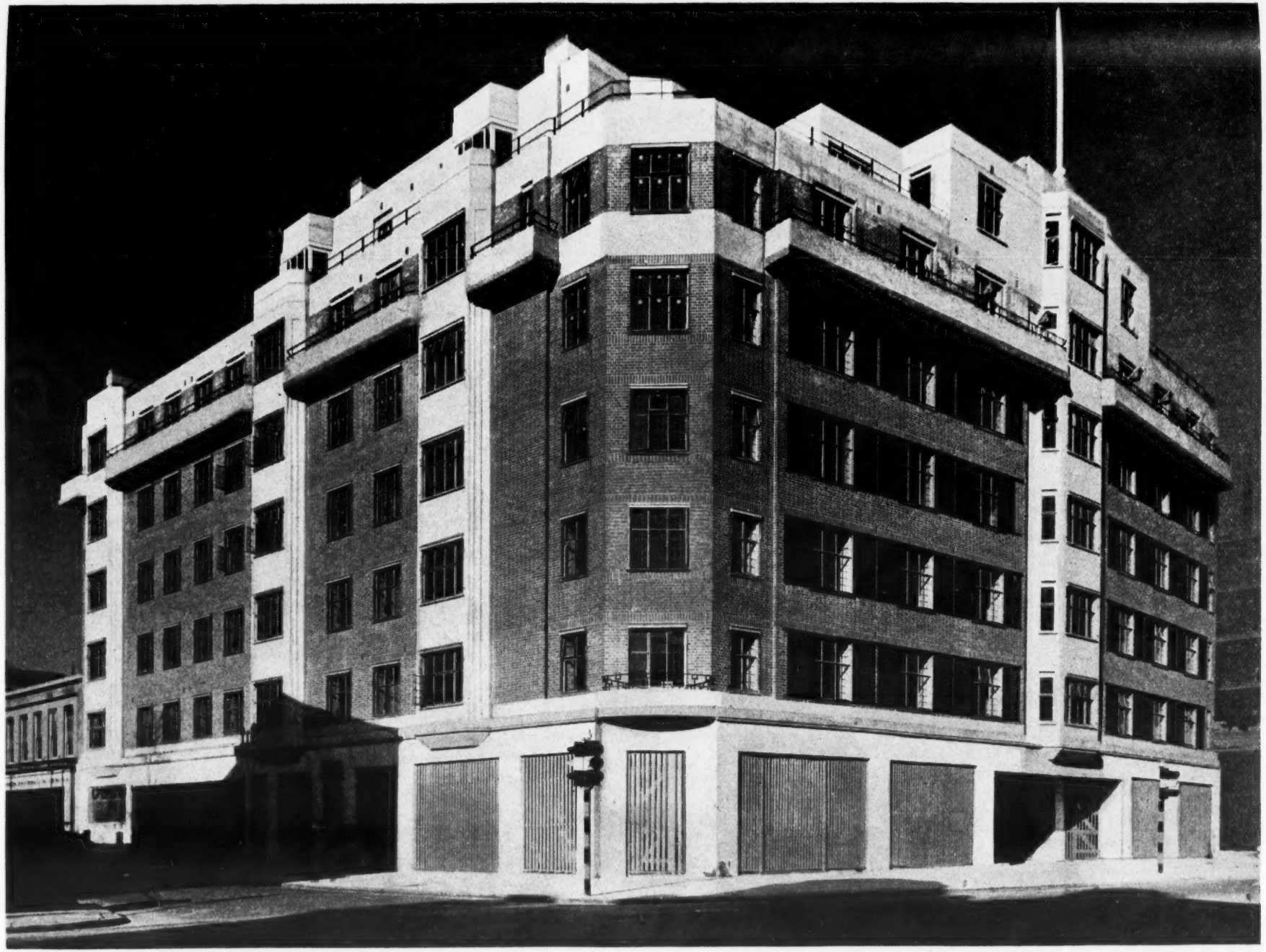

TYPICAL FLOOR PLAN.




"CROMPTON COURT," FULHAM ROAD, S.W.

MESSRS. STANLEY PEACH AND PARTNERS, Architects.

(See page 597.)



"CROMPTON COURT," FULHAM ROAD, S.W.

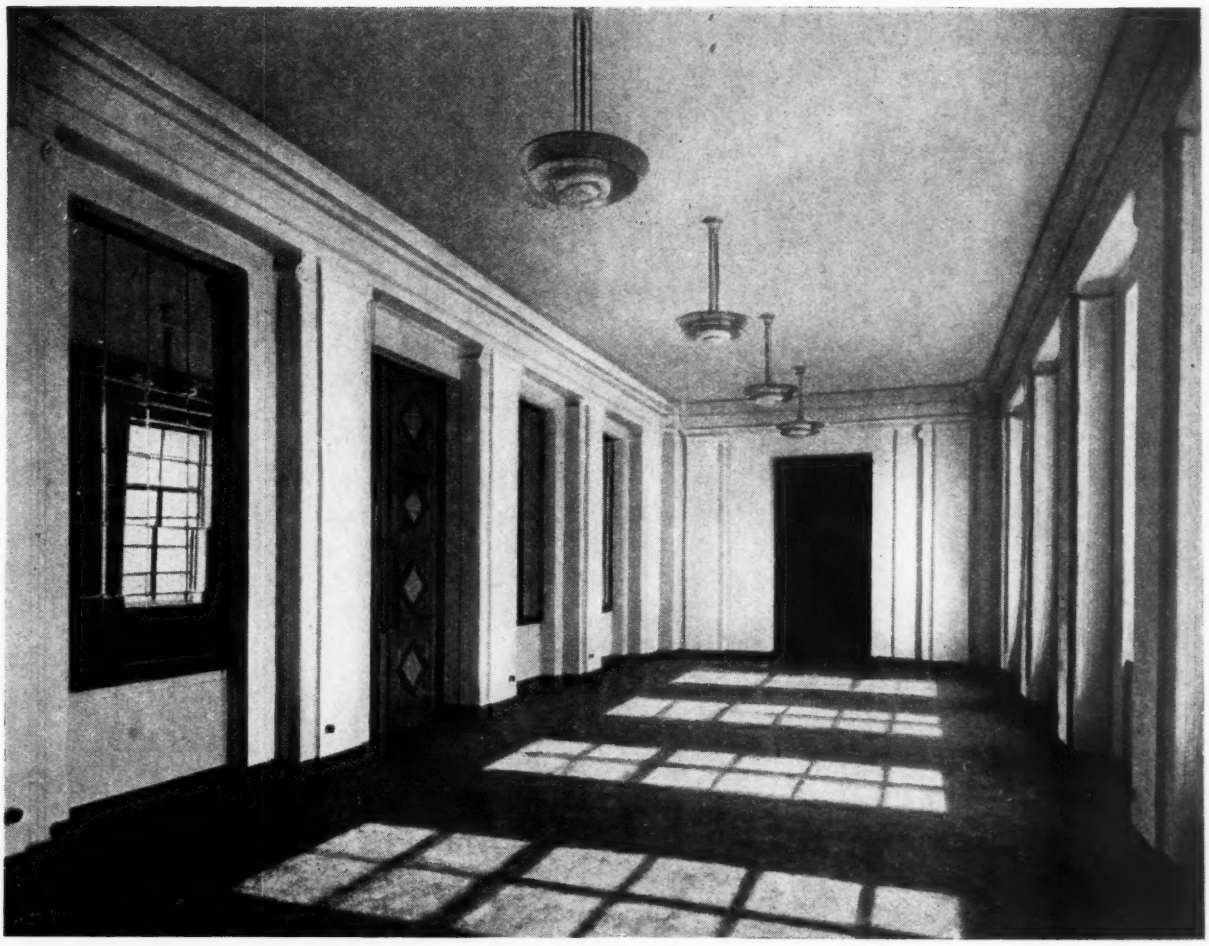
MESSRS. STANLEY PEACH AND PARTNERS, Architects.

(See page 597.)

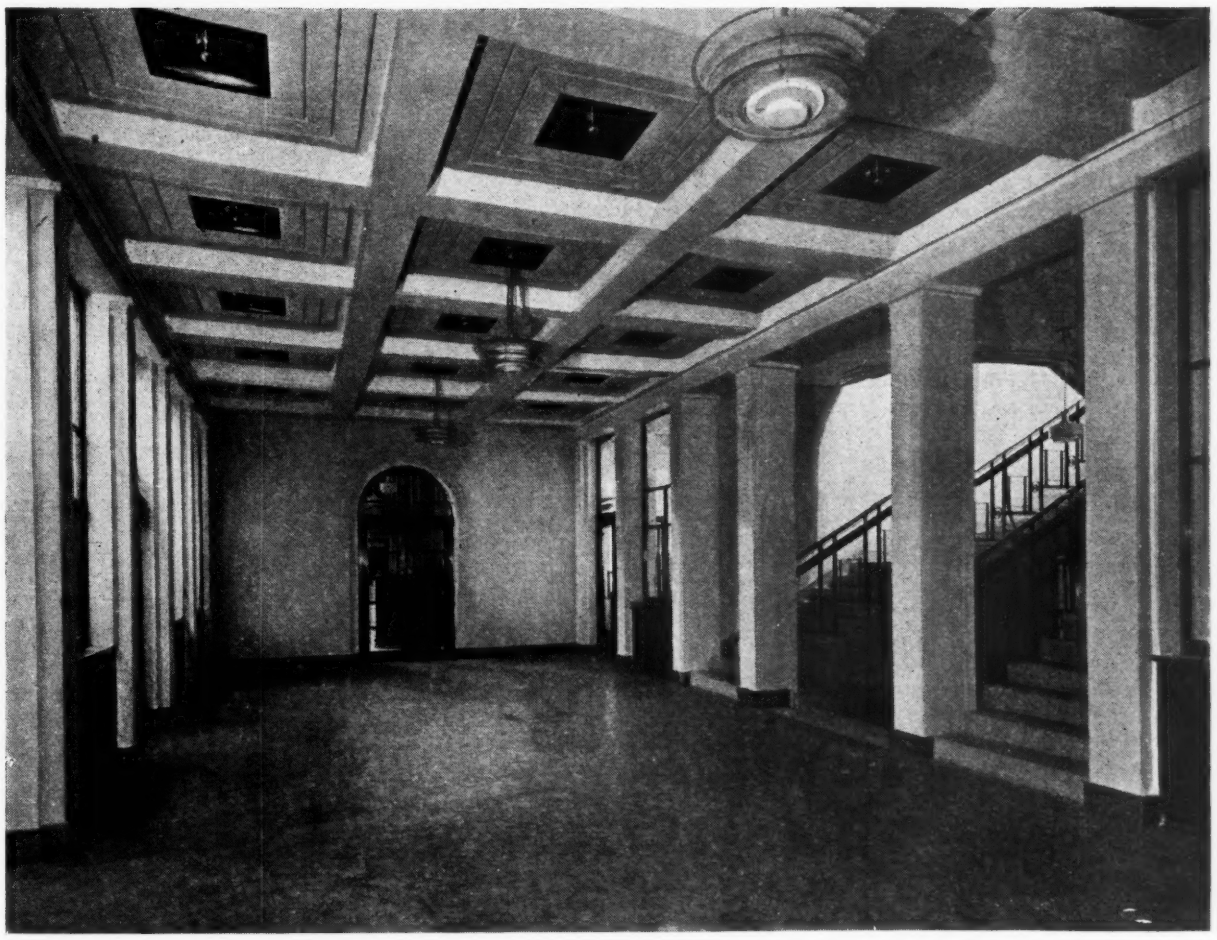
CHELMSFORD CIVIC CENTRE—CENTRAL LIBRARY.

MESSRS. CORDINGLEY AND McINTYRE, F. and A.R.I.B.A., Architects.

(See page 597.)



RECEPTION HALL, FIRST FLOOR.

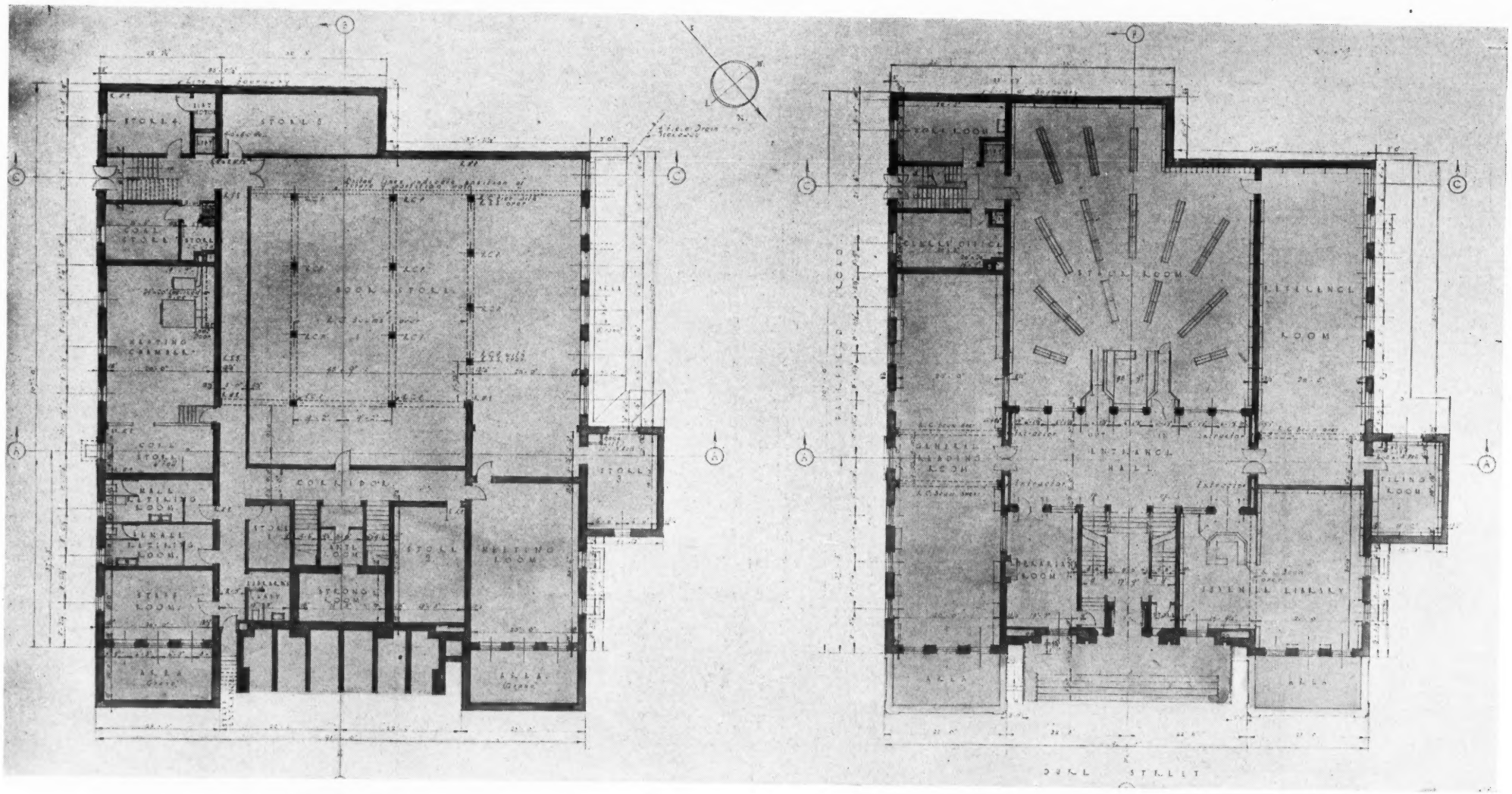


ENTRANCE HALL.

CHELMSFORD CIVIC CENTRE—CENTRAL LIBRARY.

MESSRS. CORDINGLEY AND McINTYRE, F. and A.R.I.B.A., Architects.

(See page 597.)



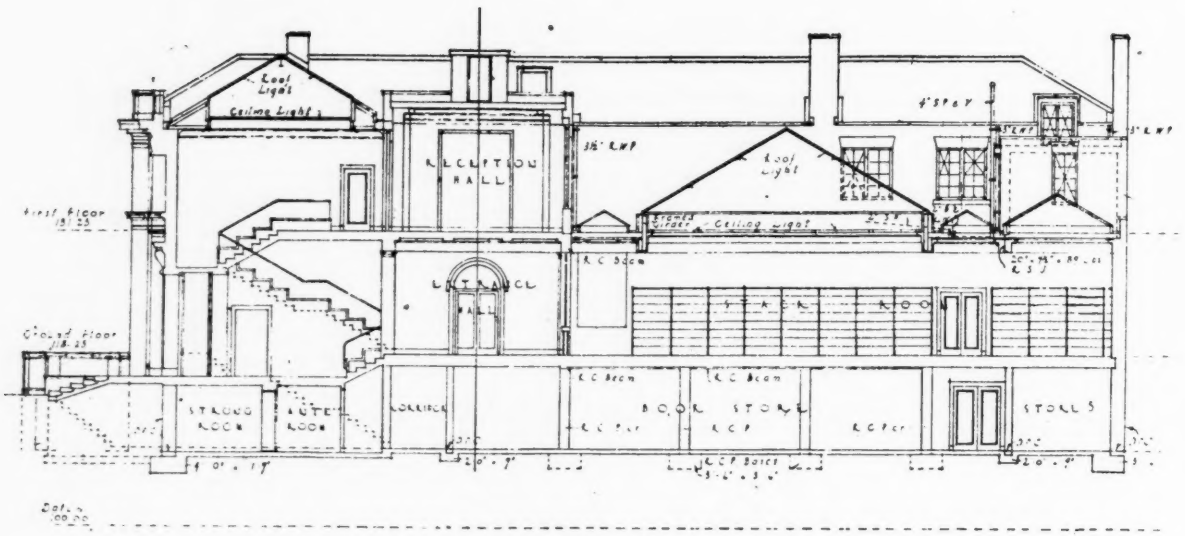
BASEMENT PLAN.

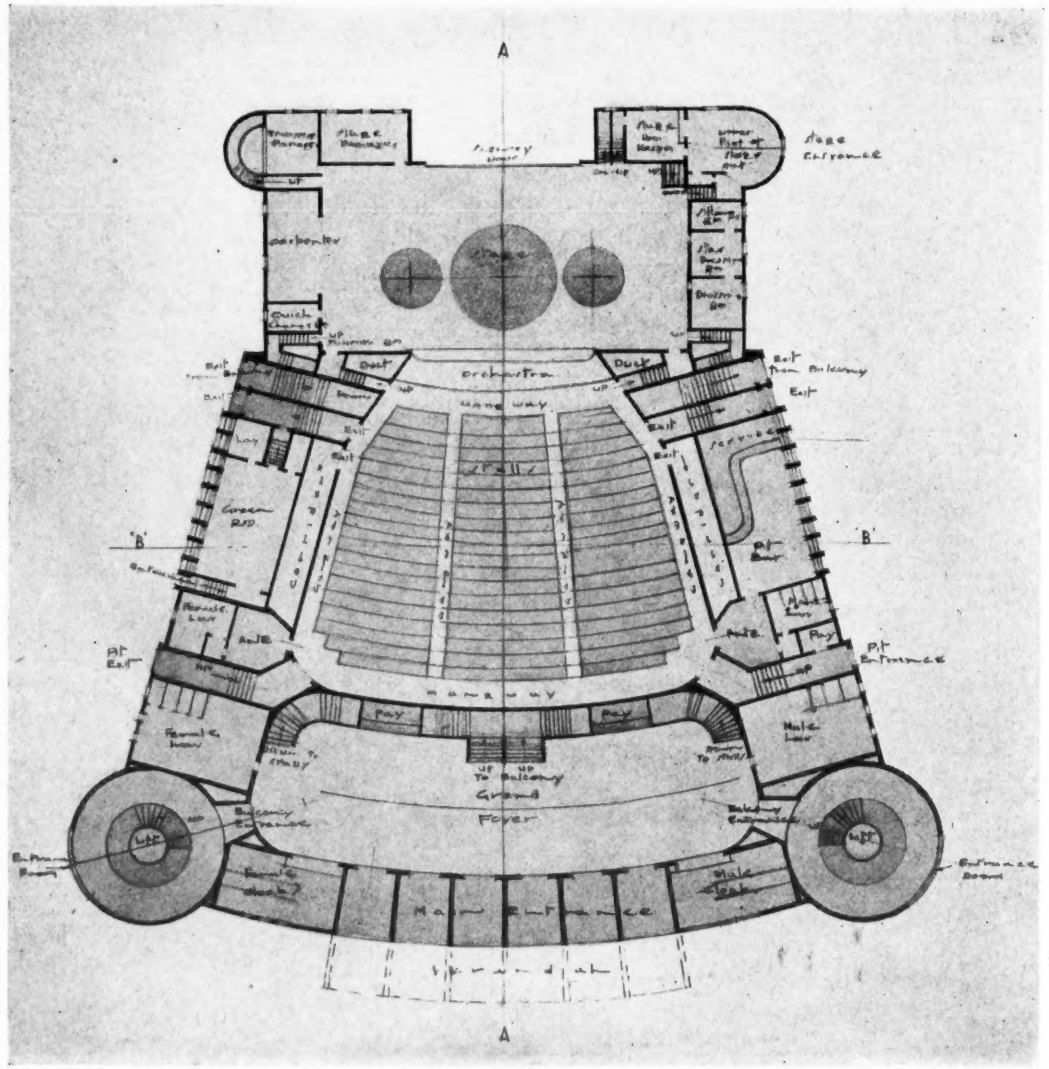
GROUND-FLOOR PLAN.

CHELMSFORD CIVIC CENTRE—CENTRAL LIBRARY.

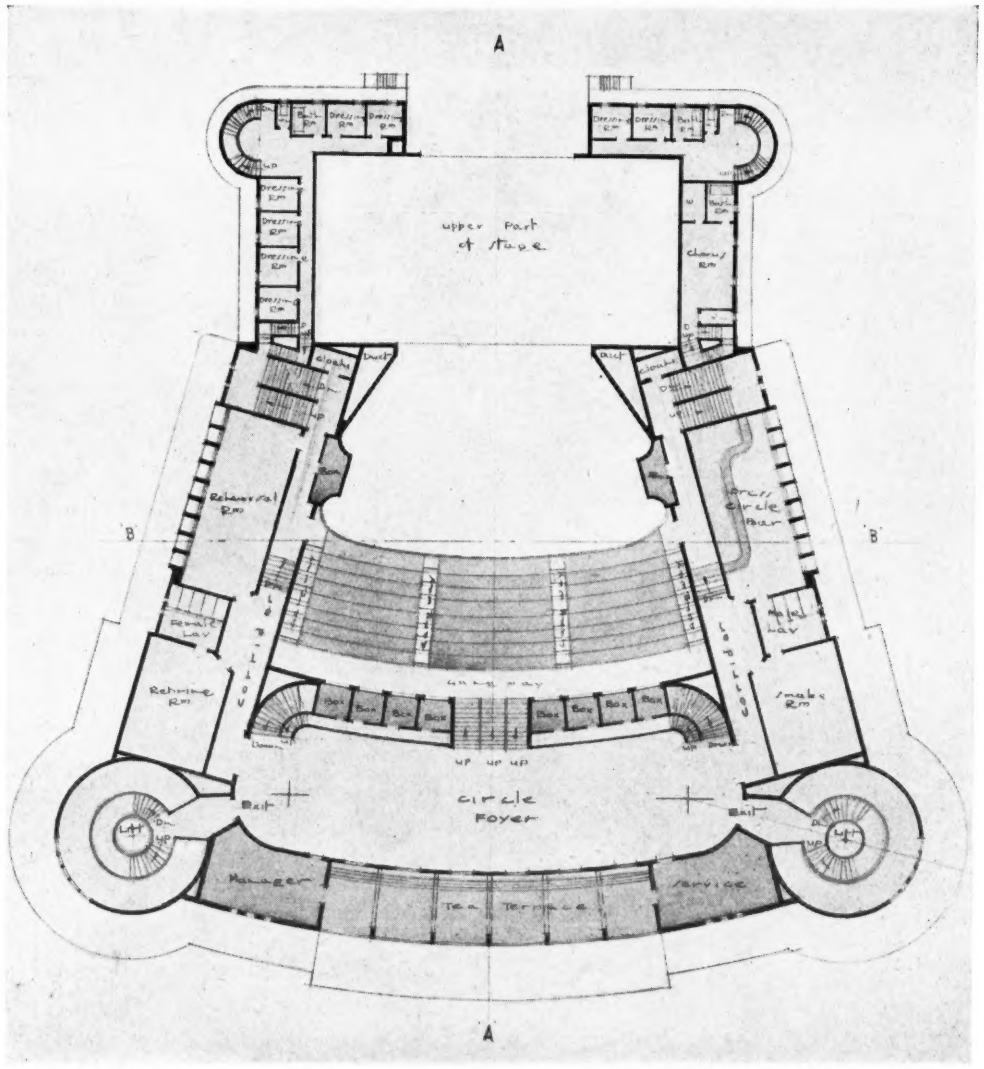
MESSRS. CORDINGLEY AND McINTYRE, F. and A.R.I.B.A., Architects.

(See page 597.)


Roof Light
Ceiling Light
RECEPTION HALL
Roof Light
first floor
Ground floor
ENTRANCE HALL
STACK ROOM
STROUD ROOM
LUTE ROOM
COLLEGE
BOOK STORE
STORE
STORE
STORE
R.C. Beam
R.C. Beam
R.C. Floor
R.C.P. Roof
R.C.P. Roof
R.C.P. Roof




STALLS PLAN.

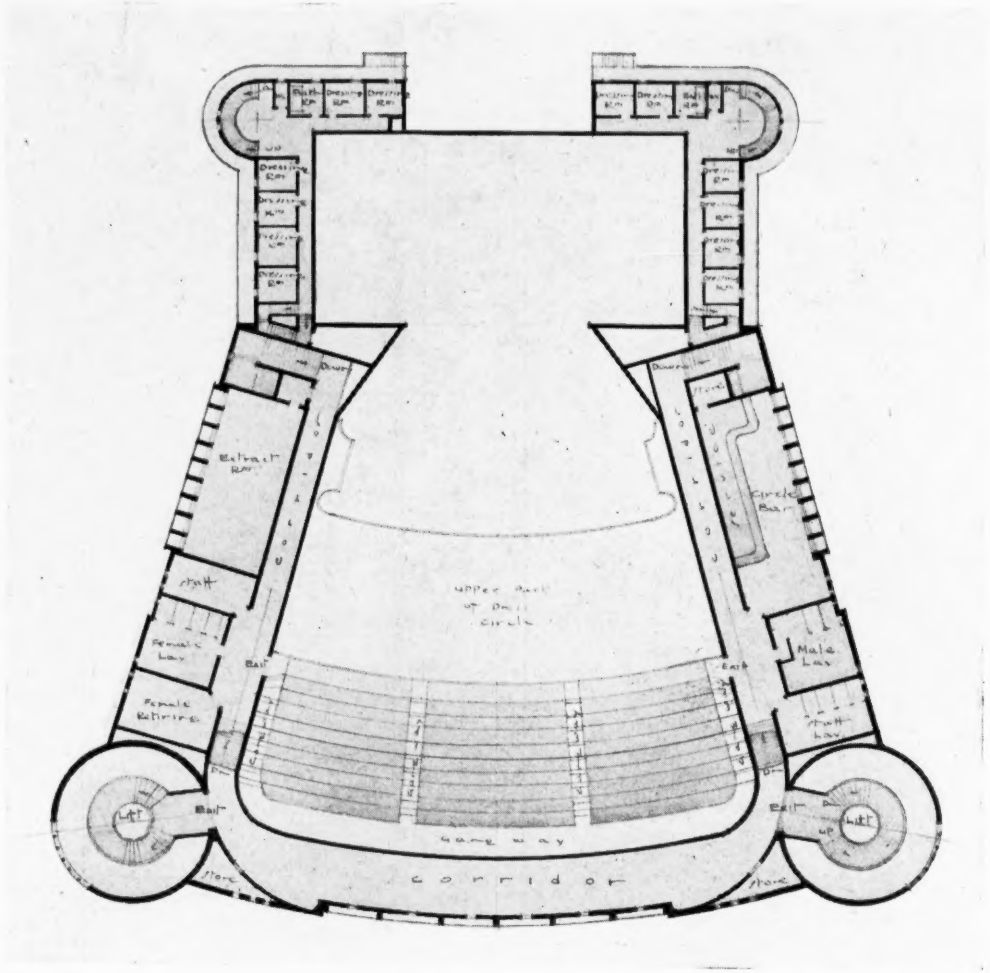



CIRCLE PLAN.

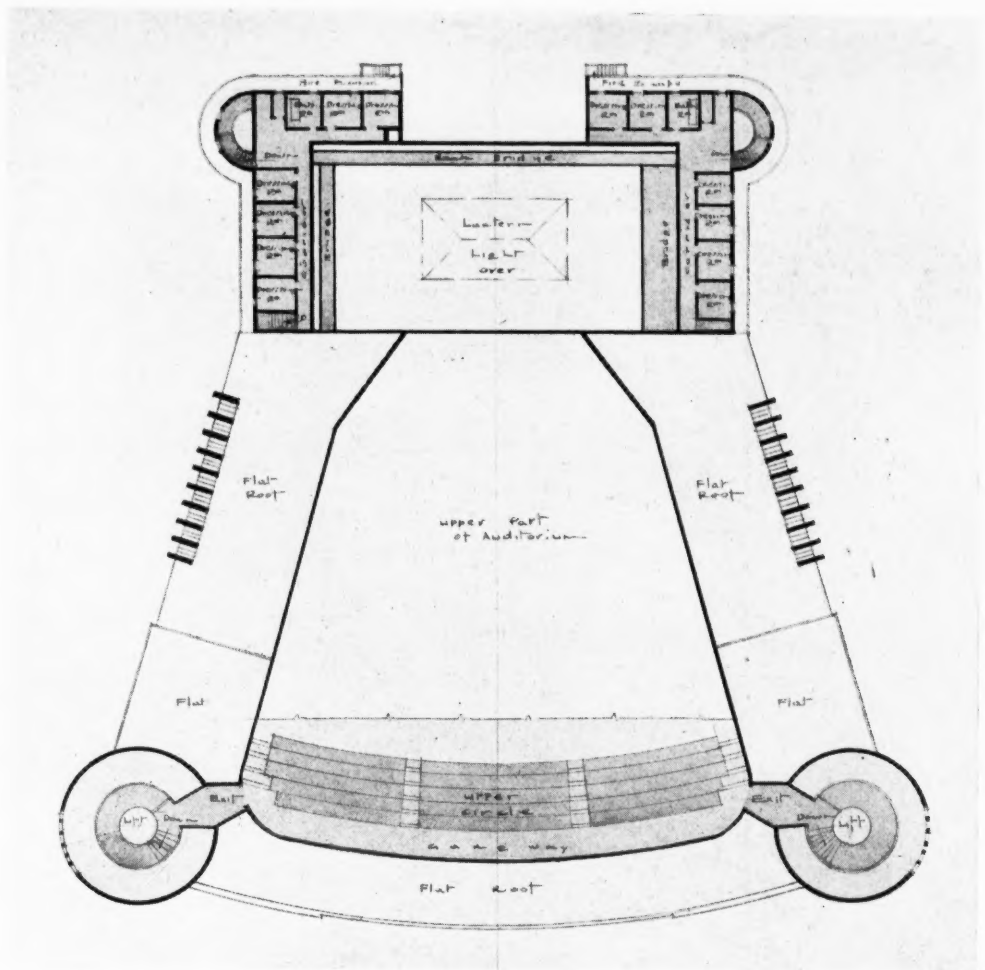
SILVER JUBILEE MODEL THEATRE.

MR. GEORGE E. TONGE, F.R.I.B.A., Architect.

(See page 597.)




UPPER PART OF DRESS CIRCLE.

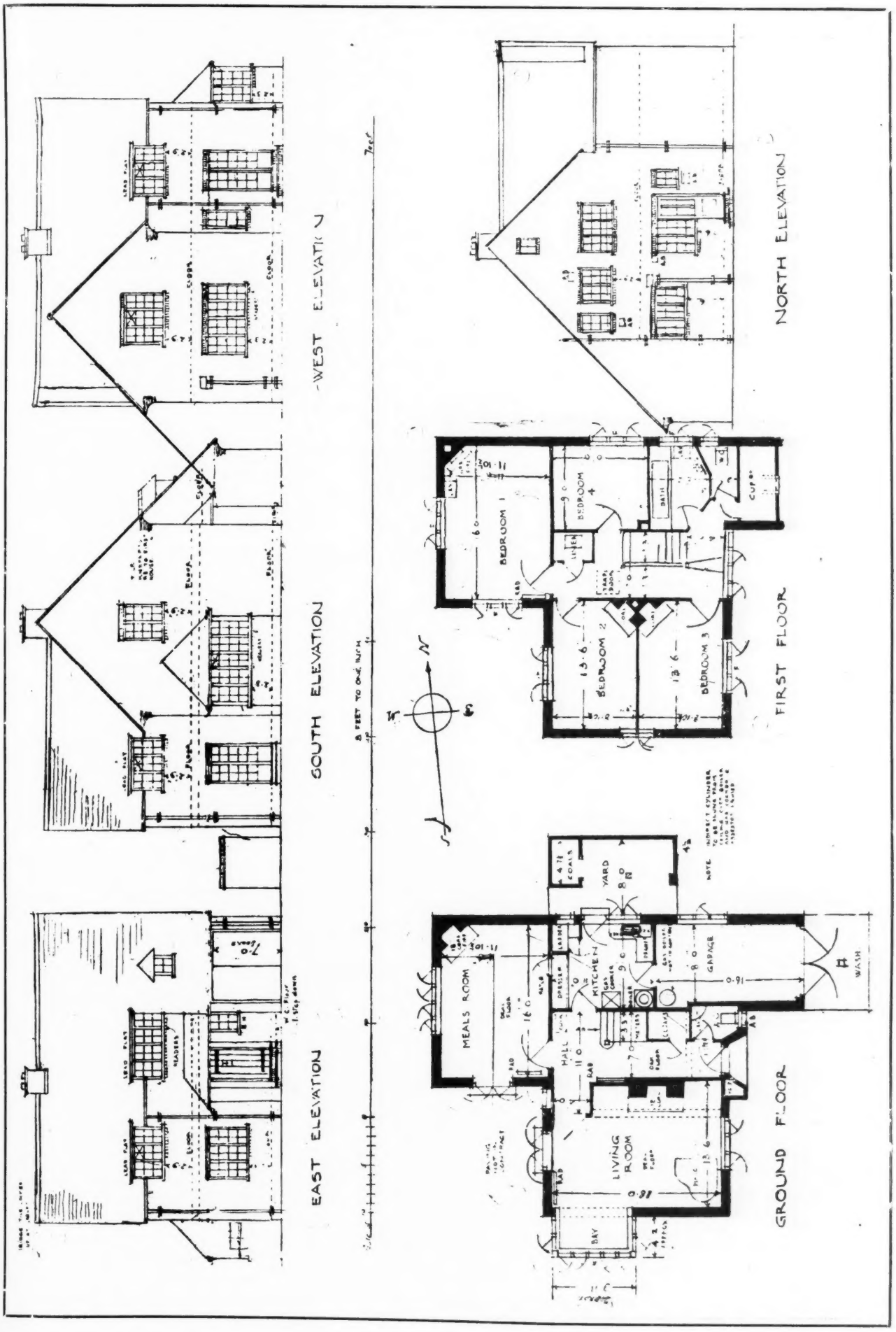



UPPER CIRCLE.

SILVER JUBILEE MODEL THEATRE.

MR. GEORGE E. TONGE, F.R.I.B.A., Architect.

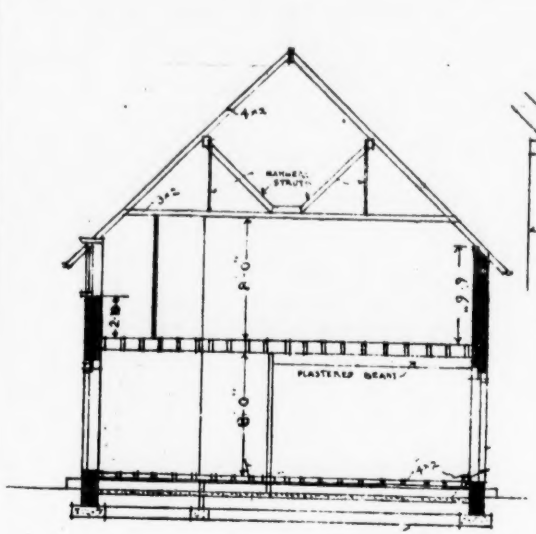
(See page 597.)

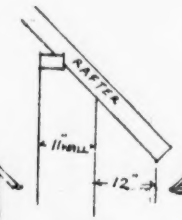



A SPECULATIVELY BUILT HOUSE.

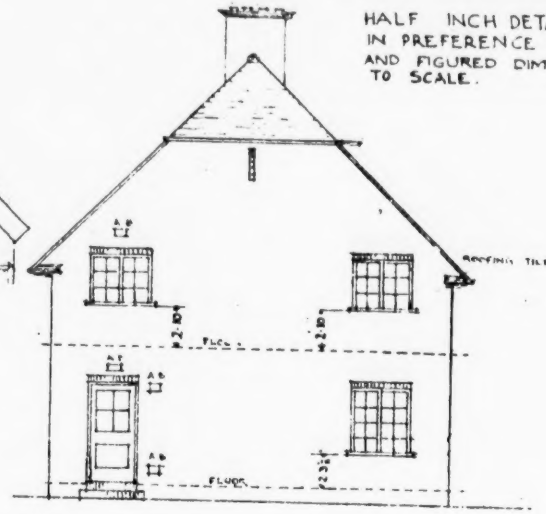
MR. EDWARD R. BILL, A.R.I.B.A., Architect.

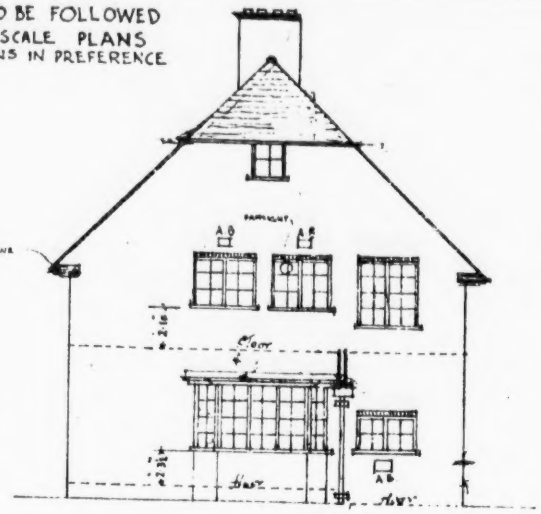
(See page 597.)




HALF INCH DETAILS TO BE FOLLOWED IN PREFERENCE TO ⅛ SCALE PLANS AND FIGURED DIMENSIONS IN PREFERENCE TO SCALE.

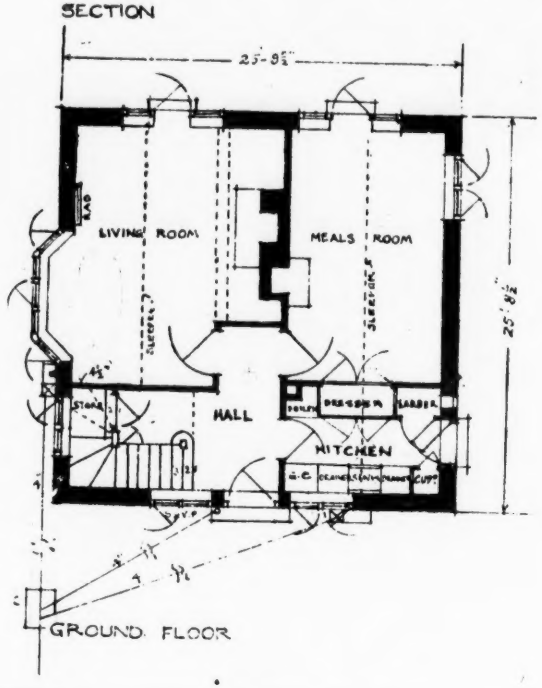


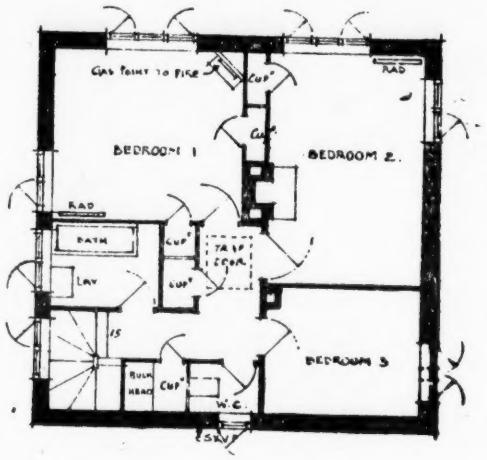



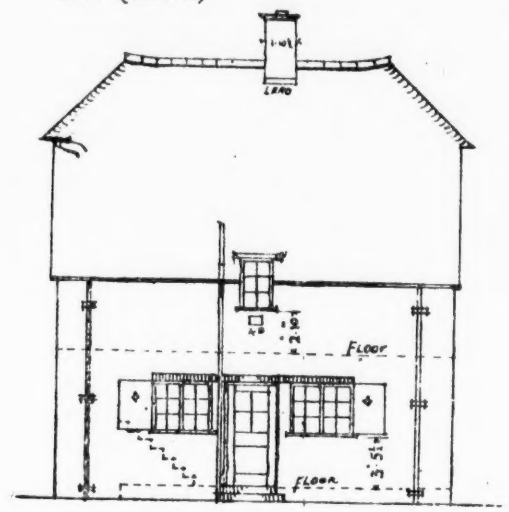

SECTION

SIDE (NORTH)

SIDE (SOUTH)




A SPECULATIVELY BUILT HOUSE.

MR. EDWARD R. BILL, A.R.I.B.A., Architect.

(See page 597.)

# ILLUSTRATIONS

## PLATES

### "Crompton Court," S.W.

Messrs. Stanley Peach and Partners were commissioned early in 1933 to erect a building for the Kenbridge Estates, Ltd., to comprise a block of all-electric flats, with shops and basements in the lower stories. The site consisted of an irregular rectangle at the junction of Fulham-road and Pelham-street, bounded by the District Railway on the north side and the offices of the Kensington and Knightsbridge Electric Lighting Company, on the west. The close proximity of the District Railway running in a canyon cutting, with the resultant volume of noise, called for special protective measures to ensure the reasonable comfort of the flats on this elevation.

A careful preliminary study of modern flat construction within the London area made it all too apparent that very little had been done in contemporary work to eliminate earth- and air-borne sound transmission. The architects paid a number of visits to flats erected before and since the end of last century, and although it was obvious that progress had been made in all other directions, the insulation of modern buildings compared very unfavourably with that of their older counterparts. This is, of course, due to the introduction of steel and monolithic reinforced concrete framing and consequent high conductivity in respect of sound waves and vibrations.

It was therefore decided to attempt a structure which would combine modern progress with the highly insulative qualities of the earlier buildings. This was accomplished by constructing a large reinforced concrete platform finishing at first floor level, upon which was built a six-story block of flats devoid of all framework, which, we understand, has had considerable effect regarding the elimination of sound transmission as compared with framed structures. The floors are of "Tee"-beam construction and span from wall to wall, leaving the flats free of all beams, and giving complete flexibility with respect to all partitions.

The flats are planned on three sides of a rectangle, being served from a central lift and staircase tower by bridge corridors, a great advantage being the cutting off of all service and staff noises from the flats proper. A private roadway with the entrance in Fulham-road and exit in Pelham-street is a great convenience to the residents.

The accommodation provided consists of nine flats of a standard type on each floor, with the exception of the sixth, where advantage has been taken of the opportunity to construct large flats with roof gardens. Their size varies from one to three bedrooms, and even the smallest is provided with a sitting-room and a separate and ample-sized kitchen. The kitchens throughout have an arrangement of service hatch and delivery cupboard, which enables the porter to deliver coals and remove refuse at night without disturbing the occupants of the flats, the tenants having a separate door on the kitchen side. Refuse is subsequently disposed of by means of an incinerator at roof level, and the residuary clinker and ashes are conveyed to the basement by chute. The service hatch enables business to be conducted with tradesmen without interference with the free use, by the tenant, of the main entrance to his flat. Additional to these facilities there is a central parcels lift controlled by the porter, who can communicate with the tenant by means of the private service telephone, and also a letter chute enabling letters to be posted at all floor levels.

Both the heating (which is by hot water radiator system) and the domestic hot water supply are obtained from an electric thermal storage plant. The electrode boiler is supplied by current during "off peak" hours at a very low rate, the heat being stored in thermal storage vessels to be used as and when required. This is believed to be the first occasion on which a block of flats in this country has been heated by electric energy.

The general contractors were Messrs. Wm. Moss and Sons, Ltd., and the following firms were also associated with the work:—Burn Bros. (London), Ltd., cast-iron drainage; O.C.P. Engineers, water-conditioning plant; Sulzer Bros. (London), Ltd., thermostatic heating and domestic hot water; Mellowes and Co., roof glazing; J. M. Newton and Sons, Ltd., copper lighting to doors; Mather and Platt, Ltd., rolling steel shutters; Osler and Faraday, some electric-light fittings; Well Fire Foundry Co., fireplaces; New Destructor Co., Ltd., "Horsfall" refuse disposal system; Nicholls and Clarke, Ltd., sanitary fittings; Haywards, Ltd., pavement lights, coal plates, collapsible gates; B. Holden and Co., "Ruboleum" corridors; John Dean, sun blinds; Troughton and Young, electrical installation; Nettlefolds, door furniture and latches; Horsley, Smith and Co., "Bruce" oak flooring; Hammill Brick Co., facing bricks; Crittall Manufacturing Co., Ltd., windows; General Asphalte Co., asphalt; George Jennings, rubber flooring in front of lift; Waygood-Otis, Ltd., lift; Stiles, builder for the wine lodge; Kingsmill Metal Co., shopfront to wine lodge; Comyn Ching, staircase balustrades; Carter and Co. (London), Ltd., terrazzo entrance hall and staircase; Standard Telephones and Cables, Ltd., house telephone system; Lamson Store Service, letter chute; Faience and Tile Crafts, tiling work to corridors and bathrooms; Frigidaire, refrigerators; Evos Doorways, Ltd., doors; J. A. King, ferro-concrete roof light over entrance hall; Ewart and Sons, Ltd., lightning conductor; Wilmer and Sons, iron railings to roof; Piggott Bros., flagpole; Doulton and Co., hot-water taps; British Challenge Glazing, mirrors in bathrooms; F. L. Brooks and Co., Ltd., Chicago door springs; Peerless Kitchen Cabinets, kitchen cabinets; Staines Kitchen Equipment, plate racks; Brent Metal Works, metalwork to front door.

### Chelmsford Civic Centre—Central Library.

Messrs. Cordingley and McIntyre were appointed architects to this building in 1930 as the result of a competition in which some 168 competitors took part. The original scheme provided for a public library on the basement and ground floors with a museum and lecture theatre, to seat 1,000 people, on the first floor. Whilst the competition for this building was in progress the civic authorities acquired an existing building which they converted into a museum. Meantime it was decided that a scheme for a complete civic centre be planned on land adjoining the library site and that the first floor over the library should be redesigned to form a Civic Suite unit with all necessary provisions for connection on to the future buildings forming the civic centre. The total cost of the building is approximately £27,000. The estimate for the full Civic Centre, designs for which have been prepared by Messrs. Cordingley and McIntyre, is approximately £90,000.

The exterior of the building is faced in 2½ in. warm-coloured sandfaced bricks with ½ in. thick, light grey mortar joints. To lend dignity and importance to the main approach, in the neighbourhood of the main entrance doors, the walls are wholly faced in natural Portland stone. This stone is also used for the main cornices, dressings and copings. In re-designing the building after the first floor requirements were changed from that of a museum to a civic suite, it was made a condition that the elevations should accord as near as possible with the original design, and this has been done.

The library is planned on up-to-date lines. The lending department, with open access, is designed to accommodate 24,000 volumes and is approached directly from the spacious entrance hall, with "in" and "out" accesses controlled from the staff enclosure. Every portion of the room can be surveyed from the delivery desk, which also commands the reading room. All main rooms are reached separately from the entrance hall, reading and librarian's room on the one side of the entrance, and the reference room (with independent desk) and the juvenile library on the other. A filing room opens off the reference room and has a book lift down to the basement. The reference room will accommodate 8,000 volumes, and there are tables for twenty readers. The reading room will seat 84 readers, and, in addition, there are racks for 20 newspapers.

The juvenile library imparts a homely and restful atmosphere, and is arranged on the open access system, similar to the main lending department. All library furniture is of oak, with a light finish and wax polished. The bookcases in the lending department are in steel. Floors throughout are in wood blocks, oak to the rooms and teak in the entrance hall.

Walls throughout are finished in plaster and a glazed bronze grille between the entrance hall and the lending department gives ample lighting and a sense of openness which will facilitate supervision. All doors here are in bronze.

The first floor is reached by a spacious staircase from the ground floor entrance hall. At the head of the stair are twin robing rooms, and immediately opposite is a commodious reception hall, from which all principal apartments are reached. There are four main rooms, the members' room, the mayor's parlour, officials' room and the committee room. The last mentioned is to be used as a temporary council chamber. The furniture for this room and that in the remainder of the Civic Suite has not been designed by the architects.

The basement is devoted to staff and utilitarian rooms, along with a very extensive accommodation for books (50,000 volumes). Book lifts connect ground and basement floors. A separate staff and goods entrance is contrived at the extremity of the Fairfield-road façade, with work and staff rooms on either side.

The heating chamber has been made large enough to serve for the future additional group of civic buildings. The heating scheme, of low pressure hot water, is contrived and co-ordinated with an artificially-aided system of ventilation to all public rooms. Extractor fans are housed in chambers over the reception hall and the caretaker's quarters.

The names of firms associated with this work are given on page 617.

### Silver Jubilee Model Theatre.

We gave last week some exterior views of this model theatre, which is now being shown to the public in aid of theatrical charities. It owes its existence to the good will of Mr. George E. Tonge, F.R.I.B.A., of Southport, and to the generosity of Mr. George Rose, a Manchester business man. The builders of the model are Messrs. Clark and Fenn, Ltd., and the electrical consulting engineers Messrs. Charles H. Bell and Co., Ltd.; while a large number of other firms and artistes have been associated with it. We give this week reproductions of plans, sections and elevations. The model is built in seven sections, for the purpose of transport, and the size, when erected, is 14 ft. square, and when placed on a stand it is 8 ft. 6 in. high.

### Speculative Housing by Architects.

In connection with the two designs for small houses which we illustrate this week, Mr. Edward R. Bill, A.R.I.B.A., writes as follows:—

"I disagree with your conclusions in this week's notes (March 15) that architects cannot hope to compete with builders in speculative housing. I recently bought a piece of land fifteen miles from London, and erected thereon two speculative houses. These were built by the well-known firm of Messrs. Lovell and Son, of Gerrards Cross, and in each case, long before their completion, I had sold them, the purchasers coming directly to me in both cases. I made a reasonable profit from each transaction, and all concerned were, and are, quite satisfied. From this experience I should feel inclined to repeat the experiment if a suitable opportunity occurred."

# SOCIETIES AND INSTITUTIONS

## ROYAL SOCIETY OF ARTS.

### Stainless Steel.

At a meeeing of the Royal Society of Arts on Wednesday, March 13, Professor Cecil H. Desch, D.Sc., Ph.D., F.R.S., Superintendent of the Department of Metallurgical Chemistry, National Physical Laboratory, presided.

A paper entitled "The Properties, Characteristics and Uses of Stainless Steel" was read by Mr. S. A. Main, B.Sc., F.Inst.P. (of the Research Department, Messrs. Hadfield, Ltd., Sheffield).

The lecturer said that the steels concerned were of two main types. First, the chromium steels, that was alloys of iron and chromium containing more or less carbon, and including cutlery steel. This in its standard type had about 13 per cent. of chromium and 0.25 to 0.35 per cent. of carbon. There were variations, improving this type for special purposes. The second class was formed by the nickel-chromium steels, that was alloys of iron with both nickel and chromium. In general in these steels carbon—the element which gave the principal distinctive character to ordinary steel as compared with iron—was very small in amount, only about one-tenth of one per cent. It was mostly unnecessary and in many cases actually undesirable.

These nickel-chromium steels also had their variations, brought about by changes in the relative amounts of nickel and of chromium, and by smaller additions of other special elements. There was, however, one main type which enjoyed a large range of uses, the most familiar of which is for household, office, and ornamental purposes, and including shop fronts and fittings. This steel contained 18 per cent. of chromium and 8 per cent. of nickel, practically the whole of the remaining 74 per cent. being iron.

### Decorative and Household Uses.

Apart from cutlery, the purely decorative and household uses of stainless steels were the most prominent. For decorative purposes nickel-chromium steel was a material with less limitations and much greater possibilities than the cutlery steel. There were few limits to the form which it could be made to take. Speaking for the moment of purely decorative uses, the scope of its use depended entirely on how far it was able, on the merits of its appearance and lustre, to replace with advantage existing decorative materials, or to supplement them. What could be achieved through the medium of stainless steel was well demonstrated at the Royal Academy Exhibition of British Art in Industry, just concluded, in the organisation of which the Royal Society of Arts took an active part. Office and domestic furniture and fittings were something more than ornamental, and where metallic qualities were required for these, stainless steel gave added strength.

### Structural Purposes.

The applications of stainless steels to structural purposes would, in most cases, necessarily involve the use of rather large quantities, and at their present cost in comparison with ordinary steel they could hardly, therefore, in a general way, be considered. Use had, however, been made of them under special circumstances, and probably the most interesting case was that of St. Paul's Cathedral. The restoration of that edifice carried out a few years ago involved the renewal of some of the original reinforcements, and the introduction of new and stronger ones. The Committee responsible for the work, desirous of making the restoration as lasting as humanly possible, decided to take advantage, as far as practicable, of the non-corrodible steels now available, many of Sir Christopher Wren's original reinforcements of wrought-iron having either corroded through or become badly weakened.

In this way non-corroding steels were used as reinforcing bars in the columns supporting the dome, as tie-rods for bracing its inner to its outer wall, and as a great chain encircling the base of the dome. The steels used included the 18-8 type, with in some cases strengthening elements added, and the type containing 20 per cent. of chromium with about 2 per cent. of nickel. The total quantity required, amounting to some hundreds of tons, was, of course, comparatively small in relation to such a massive structure.

In the new Library buildings at Cambridge the lower floor was completely suspended so as to have it free from columns. This was effected by suspension members encased in concrete "chimneys." Stainless steel was the obvious choice, and, without the care and attention necessarily given to ordinary steel, which in this case was not possible since the members were inaccessible for painting, should give the necessary assurance of safety over an indefinitely long period of years. The present interest of architects and builders in stainless steel was mainly as an effective external ornamentation which would resist the weather, and full play had been given to that mode of utility in the Empire State Building and the Chrysler tower in New York. These were sheathed with sheets of stainless steel of the standard 18-8 variety, with very striking effect.

### The Corrosion Problem.

The enormous wastage of iron and steel in general by corrosion, and which the introduction of stainless steel had really done little to stem, now occupied the attention of quite a large number of investigators in all the principal manufacturing countries of the world. Its economic importance to mankind was emphasised by estimates, which indicated that in years of low production, like 1921 and 1933, the amount of iron and steel made had barely made up, and possibly been even less than, the amount either destroyed by corrosion or discarded as being rendered unserviceable due to its effects. That amount in any one year was believed to be about sixty million tons. With consequential losses in cost of renewals, disturbance of business and in other ways, the loss was enormous.

The general solution of the corrosion problem, if it was ever to be found, must therefore be looked for in something which would modify favourably the rust-resisting properties of iron and steel themselves without changing their essential other qualities, unless for the better. The prospect of obtaining a complete victory over corrosion seemed so remote as to be negligible. The possibilitie s of alloying had already to a large extent been explored. The elements useful in that way had either only a partial influence or, like chromium, were either required in such large proportions as to be uneconomic, or they seriously modified the ordinary properties of the steel for general purposes. Even a partial solution would, however, be highly acceptable, and in that way the addition of copper to steel was the most promising thing so far. It was now well established that copper steel was less corrodible than ordinary steel. In a clean atmosphere or against the corrosion of fresh clean water its advantage was very little, but in industrial atmospheres and situations where sulphuric deposits from smoke occurred, the reduction in wastage might amount to 30 per cent. or more. It was curious that very little copper was necessary to effect this—not more than $\frac{1}{4}$ to $\frac{1}{2}$ per cent. The other properties of mild structural steel were, therefore, not upset by that addition. In this country copper steel was in general undergoing a period of probation, with trials on a practical scale by railway companies and large and small firms. Those trials would establish definitely its right place in the scheme of things. Although that might be limited, there seemed no doubt that its use would grow, in time, to an extent sufficient to have some favourable influence on the debit we were under by the wastage of our structural steel generally.

## LEICESTER AND LEICESTERSHIRE SOCIETY OF ARCHITECTS.

The annual dinner of this Society was held in Leicester on March 19, when Mr. Trevor Sawday (President) presided over a large body of members and guests.

Sir Giles Gilbert Scott, responding to the toast of "The R.I.B.A. and its Allied Societies," referred to the great significance of the growing public interest in architecture. It was, he said, an undoubted fact that in the last 15 years they had seen a remarkable change in the public attitude towards architecture. It was a reaction to the attitude of the period when architecture was the Cinderella of the arts. The growth of public taste in architecture was a great encouragement to the Institute to leave its mark on the civilisation of its time. The responsibility of municipal authorities had increased, and the amenities and appearance of a town were such that it was desirable that they should have the best expert advice it was possible to get. "One looks forward to the time when everything will become naturally beautiful, instead of being artificially legislated for," he said.

Sir Ian MacAlister replied on behalf of the allied societies.

During the evening the bronze medal of the Institute for the design of a building of outstanding merit in the district was presented to Mr. Pike, of Messrs. Symington, Prince and Pike, for the Kay Bee House in Charles-street. A medal was also presented to Messrs. Kimberlin and Brown, the owners of the building.

[This building was illustrated in *The Builder* for August 11, 1933.]

## EDINBURGH A.A.

### Annual General Meeting.

The annual general meeting of the Edinburgh Architectural Association was held at 15, Rutland-square, when Mr. A. F. Balfour Paul, F.R.I.B.A., was re-elected as President for the ensuing session. Messrs. John Begg, G. D. Macniven, J. A. W. Grant, T. Aikman Swan, Leslie G. Thomson, and G. L. Martin were elected to the Council. The annual report, submitted by Mr. A. Nicol Bruce, the Secretary and Treasurer, stated that the membership of the Association had increased by 189 during the past four years, the total net membership now being 453. Cordial congratulations were expressed to nine members of the Association who had gained leading prizes awarded by the Royal Incorporation of Architects in Scotland and by the R.I.B.A., and likewise to the architectural staff of the Edinburgh College of Art. A memorandum had been submitted by deputation of the Association to the Lord Provost's Committee as to devolution of certain Corporation work, and it was hoped that in due season the services of the architectural profession in Edinburgh would yet be made available to the Association's valued colleague and member, the City Architect.

## ROYAL SOCIETY OF ULSTER ARCHITECTS.

The award of the jury for the R.I.B.A. Ulster Architectural Medal, 1933, has been approved by the R.I.B.A. The medal is awarded trienially for a building of outstanding architectural merit, erected in the area of the Royal Society of Ulster Architects, and has this time been awarded to the Parliament Buildings, Stormont, the architect for which was Sir Arnold Thornely, F.R.I.B.A. The building was illustrated in *The Builder* for November 11, 1932.

## THE ARCHITECTURAL ASSOCIATION OF IRELAND.

### Revue by Dramatic and Musical Societies.

On March 12, 13 and 14 the Dramatic and Musical Societies of this Association broke new ground by combining to produce a revue composed of short sketches, complete with compère—Miss Maureen Devlin. The cast contained twenty-one players, and the production was in the hands of Mr. Peter Bailey. Incidental music for piano, 'cello and violin was composed by Mr. Manning Robertson. The prologue showed a meeting of the societies discussing what the play should be. It being impossible to agree on anything, or to get people to rehearse, it was decided to produce short items without any rehearsal. A telegram then arrived reminding

them that the play was fixed for that night and had to start forthwith. The revue was a great success, but the audience was somewhat thin on account of the bus and tramway strike.

## DESIGN AND INDUSTRIES ASSOCIATION.

### Birmingham Group Annual Dinner.

Speaking at the annual dinner of the Birmingham Group of the Design and Industries Association at the Imperial Hotel, Birmingham, Professor Walter Gropius, in giving a lecture, illustrated by lantern slides, on "Design and Industry," said that to-day we were in a position to prove that the outward forms of modern architecture and design were not the whim of a few architects or artists hungry for innovation, but the inevitable consequential product of the intellectual, social and technical conditions of our age. The development of the new architecture encountered serious obstacles. Conflicting theories and personal manifestos helped to confuse the main issue and, worst of all, "modern" architecture became fashionable, with the result that formalistic imitation and snobbery distorted fundamental truth and simplicity. That was why the movement must save its original aims from the strait-jacket of materialism and false slogans or misconception. He personally had tried to solve the ticklish problem of combining imagination with technical proficiency and strove to train a new and hitherto non-existent type of collaborator who should be equally skilled in design and technical proficiency. The workshops of the Bauhaus, which he founded in 1919, were really laboratories in which practical designs for present-day goods were worked out as models for mass production and were continually improved on. The Bauhaus represented the school of thought which believed that handicrafts and industry must be understood as opposites perpetually approaching each other.

## AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE.

### Preliminary Examination, January.

We have received a copy of the Pass List in connection with the Preliminary Examination of this Institute, held in January last. 203 candidates presented themselves, of whom 135 passed, being 66.5 per cent. The candidate first in order of merit is Mr. Douglas Frederick Todman, of Chelsea, S.W.3, who has been awarded the Institute prize of four guineas in the form of text-books for the Professional Examinations.

## THE COLLEGE OF ESTATE MANAGEMENT.

### Cement as Applied to Modern Structures.

At the College of Estate Management recently a special lecture was delivered by Mr. T. R. Grigson, M.Inst.C.E., on "Cement in its Application to Modern Structures." After describing the history of cement, which he traced back to the Carthaginians, and giving some useful facts about its composition, the lecturer showed a number of lantern slides illustrating its use in modern building. In this respect, he said, the Americans seemed to be very much in advance of British architects and builders. Their treatment of concrete was really wonderful, as witness the University of California, the whole of which was a reinforced concrete structure, with no rendering of any sort upon it. A London example was to be found in Dorchester House, Park-lane, where pre-cast concrete blocks were used as the shuttering, and behind these the ordinary concrete was poured; behind that, again, was a sheet, 2 in. thick, of composition cork for soundproof purposes. At the open-air bath of the Royal Automobile Club at Epsom the ordinary concrete blocks made on the site were used, and on these a polishing machine, electrically operated, placed the desired polish. The application to domestic architecture was first shown on a complete scale at Amersham, in Buckinghamshire, where a whole house was built of concrete, the exterior walls being 4 in. thick, with half an inch insulating layer of wall board.

# "THE BUILDER" DEBATE

LXXIV.—"*That the attempt to operate the Amenities clauses of the Town and Country Planning Act with the assistance of Advisory Panels of Architects is a failure.*"

Sir,—I very much deplore the setting down of such arguments as "Positive" has produced in connection with this somewhat delicate matter. We are all agreed that the preservation of the amenities by law is not only a difficult matter, but one for which a perfect solution cannot be found. Having said so much, it is inevitable that I should place myself at some disadvantage in this particular debate. Unfortunately, "Positive" has no constructive suggestions to make whereby the same work can be carried through by other and better means, and the whole of his argument is thus purely destructive. I could almost content myself by asking him whether he would be satisfied to revert to the old uncontrolled method, the fruits of which have led to the reforms which are being attempted. An honest answer to such a question would do much to restore the position in my favour, because it is quite evident that "Positive" is not indifferent in this matter but has simply become appalled by difficulties which we have all realised, and some of which still await solution. It would, however, be insufficient to leave the subject in such an indeterminate state, and I can best proceed by analysing the objections which "Positive" specifies in detail and indicating to the best of my ability the way in which these objections can be least offensive.

Taking the voluntary system first, it is somewhat surprising to find an argument directed against this system separately, particularly as "Positive" shows subsequently much concern that Panel members should not profit by their services. I cannot understand in what essential way the voluntary services of a Panel of Architects differ from the voluntary services of an Urban District Council. Both reflect the public spirit which ensures good local government. There is, indeed, a case for paying a man for such onerous duties, but the country is well content with the present way of doing things while the right men can be found to offer themselves. The fact that the Panel gives technical services as opposed to the non-technical services of an ordinary local councillor does not appear to me to have any essential bearing upon the question. In fact, in a sense, services of a technician in his own line of business may be regarded as less onerous than those unaccustomed responsibilities which fall upon the shoulders of an ordinary councillor. I suggest that this argument, upon which "Positive" dwells at some length, falls entirely to the ground unless he is prepared at the same time to suggest that the urban, rural and borough councils should be filled with paid officials instead of citizens acting in an honorary capacity. Nor is it a fact that honorary services deny the right of dismissal. Any unpaid public servant can be dismissed for misdemeanour and is rarely re-elected if inefficient. These safeguards are equally attached to the Advisory Panels.

"Positive" follows this indefensible argument with another of similar kind, in suggesting that where business duties clash with honorary services the latter must suffer. Something can be said for this as a human fact, but I am quite unable to see any essential difference between Panel work and ordinary council services. Presumably, the average councillor is either a retired man who can afford the time for his unpaid job, or is so organised in business that he can attend to both efficiently. Exactly the same thing applies to the Advisory Panel, with this essential difference, that whereas services on district or borough council imply not only a monthly meeting in council, but committee meetings often to the number of two and three a week, as well as special visits, the member of an Advisory Panel rarely has to devote more than a couple of hours a week upon his job. If there is anything at all, therefore, in this argument, it is quite evident that it applies far more strongly to the councillor than to the Panel member.

We now come to the question of uniformity. I entirely agree that a wide divergence of view as to how town planning matters should be administered is to be avoided. I cannot see, however, why it should not be possible to establish certain general principles under which the Panels might act throughout the country. Within these broad principles, a certain difference of view in detail would be a minor objection weighed against the advantages. Exactly the same thing applies to local by-laws and even to their interpretation. We overcome these difficulties in local government, and the same should be possible in panel work.

The objection that the employment of practising architects upon panel work is inadvisable is only at best a part argument against the system, because there is no rule to the effect that members should be in active practice. On the other hand, the fullest use is being made of the older architects who are actually in retirement or in partial retirement, and such men, if of the right type, will always be a first choice in this campaign. But it is obvious that there are not enough of this type to fill the Panels and that the number must be made up from the ranks of active practitioners. "Positive" suggests that the suspicion of prejudice in such cases is inevitable in the minds of the public. I think he does scant justice to the fair-mindedness of the public, though there are always people willing to think the worst of anybody who assumes a prominent part in local government. The councils are full of builders in business, and the wonder is that the average councillor of this type is able to preserve a detached and fair-minded attitude. I imagine that "Positive" does not suggest that there is any danger of the average practising architect manœuvring to turn his voluntary services to profit. But when "Positive" states that the Panel system is designed to force the public into the architects office, he is driving very near the truth, though it is strange that he, presumably an architect himself, having full faith in the usefulness of architectural work, should regard this as an argument against the system. If we believe, as we must, that the design of houses is the rightful work of the architect, it is surely rather a virtue than otherwise that we should share in a campaign which points towards an expansion of this desirable way of working.

I have a great deal of sympathy with the next argument which "Positive" puts forward, being well aware how deceptive purely paper work can be in the process of decent building. There is, indeed, a faulty link in the chain where so much dependence has to be placed upon paper work. But at the moment this difficulty seems to be inevitable, and we have to take comfort from the knowledge that whereas it is possible to make an ugly building from an efficient design on paper, the likelihood of good building arising out of the good plan is much greater than the likelihood of sympathetic building producing comeliness out of a bad plan. Thus we can have some confidence that results arising out of this imperfect way of working are in the right direction.

Finally, in a sweeping paragraph, "Positive" 'says that the continued growth of built-up areas comprising mainly indifferent and in some cases thoroughly bad architectural design, is a practical proof of his argument. How far he has troubled to obtain authority for this sweeping statement I am not aware. There is no doubt whatever that, at least in some districts, the standard of house design shows a marked improvement in recent years as the direct result of the Panel system. We have not yet attained perfection. Indeed, we are very far from it. But we are working steadily towards it with every likelihood of ultimate success. Negative.

[Correspondence on this subject is invited. —Ed.]

# AIRPORT DESIGN

A PAPER on "The Lay-out, Design and Construction of Aerodromes and Airports," was recently read by Mr. H. E. Brooke-Bradley, M.I.Struct.E., before the Institution of Structural Engineers.

It had been estimated by aviation experts, said the lecturer, that an average distance of 20 miles between aerodromes all over the country might be taken as a sound basis for future requirements. Near large cities the distance would be considerably less. On this basis from 200 to 250 more stations were needed, and when it was realised that the time taken to make an aerodrome was from two to three years, the necessity for stimulating activity would be appreciated.

Aerodromes were of various classes, differing in ownership, location and the purposes for which they catered. The ownership might be vested in the State, in private or corporate bodies, or in a public authority. The rapidity of aeronautical development rendered it somewhat difficult to attempt any adequate classification of aerodromes. They might be devoted primarily to one specific purpose or might fulfil several functions. A brief list was as follows :—(1) The Terminal Air Port. —This was usually controlled by the State or Municipal Authority, situated near important cities, and equipped for dealing with passengers, merchandise, and air mail. Such a station if required to serve overseas as well as internal air traffic would possess Customs, police and immigration offices. (2) Intermediate Aerodromes.—Usually under control of a public authority, and designated "Municipal Aerodrome." Established near important towns to serve as a link between terminal airports and for privately-owned aircraft and air services. (3) Flying Club Aerodromes. (4) Commercial Aerodromes. (5) Private Aerodromes.

Aerodromes might be further differentiated as ports for seaplanes, or might serve both land and sea aircraft.

## Selection of Site.

The selection of a site for an aerodrome was a matter of primary importance as the future of the undertaking depended largely upon the judgment of those responsible. Selection was dependent upon the co-ordinated reports of several experts. By a series of test flights in varying climatic conditions, the aviation expert would report on the nature of air currents and eddies encountered over the site; the meteorologist would supply data on wind direction and velocity, prevalence of fog, rainfall, etc.; the town planner would conserve the site, control development, and prevent obstructions around its perimeter; the engineer would furnish reports on the topography of the site, bearing value of the soil, drainage details, and constructional items relating to buildings, water and power supplies. He would also report on the road system, and on other existing means of transportation. Like so many municipal problems, the reservation of an aerodrome was fundamentally a phase of town planning, and as such, steps should be taken by all responsible authorities to act immediately and conserve sites before the available land was cut up by speculative builders. The needs of aviation should rank high in the question of zoning. Safety and economy were the two most cogent factors to consider in surveying a site. Low-lying ground was often comparatively cheap, but was subject to mist, fog and flood. Hills and quickly undulating ground adjacent to a site caused turbulent air currents which should be avoided. A low plateau, slightly raised above the surface of the surrounding terrain, was probably the ideal location.

To be effective air traffic must be correlated to ground transport. As speed was the essence of aerial transportation, the time taken up between the flying field and the business centre was of major importance. A 15-minute trip by fast car was a reasonable period to allow; 40 minutes should be the limit.

Before any site could become established and approved for licence, certain standard requirements were demanded by the Air Ministry. As an aerodrome's effective use was governed by its dimensions, the most important was that relating to size. The effective use might be termed the minimum length of clear run in all directions. For the larger types of aircraft, the landing space should be not less than 600 yards, and should, if possible, extend to 800 or 1,000 yards in every direction. Only in exceptional circumstances would the Ministry issue a licence if the clear run was less than 600 yards, although a special permit might be granted for a field limited to light or small aeroplanes only. In this case 400 yards was accepted, provided that all the ground outside of and within 100 yards of the perimeter of the aerodrome contained no obstruction higher than a 3-ft. fence. It would be seen that the best shape for a site was a circular one, or as near an approximation to that as was possible. For a municipal aerodrome about 100 to 150 acres of land would be required.

## A Master Plan.

Having reserved the site, it must be determined to what extent the aerodrome should be conditioned for flying. In addition to the landing ground, space would be required for hangars, workshops, administration buildings, etc., and car park. At airports—as distinct from aerodromes—additional buildings would be necessary for Customs, police and immigration offices, and so on. All buildings, as well as the actual landing ground, should be so designed and constructed as to be capable of ready expansion when the occasion arose. For economic reasons, the development of an aerodrome should be by progressive stages, and for this reason the preliminary work of every description should be subordinated to a master plan of the completed aerodrome as visualised 15 years ahead. This was a lesson which the Continent and America had taught us. In the latter country, it had been authoritatively stated that the present airports in American cities in general were being adjudged as inadequate and inefficient.

After discussing the preparation and treatment of the landing ground, drainage, runways and "aprons," the lecturer turned to the design of hangars. At the moment, he said, it was impossible to forecast the ultimate size of aircraft. Air liners to-day had a wing span of over 130 ft., and if that span appreciably increased, the cost of hangar construction would become prohibitive. In any event, all-weather machines of the future would probably only enter a hangar for repair work. The two determining factors in design were height of doorway and length of span. Hangars catering for very large machines needed a clear height of 40 ft.; on a municipal aerodrome probably 20 ft. would suffice. In this connection, the designer must remember that the height of the doorway was really the effective height of the hangar. As a hangar must have as far as possible a clear floor space uninterrupted by stanchions, the question of span was important. Aircraft was usually stored in two rows, back from the door openings, and it was therefore cheaper to build a hangar of comparatively short span with its greatest length facing the landing ground than a long span structure with end doorways. For the average machine an end-opening hangar with a span of 120 ft., and a length of 250 ft., would suffice. while a span of 100 ft., and a length of 300 ft. would be required to house the same number of aircraft. In the early stages of development, it would be cheaper to provide the requisite ancillary accommodation in an annexe built against a wall of the hangar.

## Construction of Hangars.

The two principal forms of construction were steel-framed or reinforced concrete. Both had their exponents, and there were many arguments in favour of either. A steel-framed structure conformed to the basic rule which should guide the development of an aerodrome, viz., that every part or function should be capable of expansion. It had in addition great qualities of flexibility, adaptability, and mobility. Reinforced concrete was essentially monolithic in character, which constituted its greatest drawback. It was, however, practically fireproof, which was a big point in its favour, and while the initial cost was slightly higher than steel, the first cost was the last. The problem with steel was to clothe it satisfactorily, but that could be done in a pleasing manner if a little thought was given to the problem. In panel construction, there was a wide range of artistic multi-coloured bricks to choose from, or, alternatively, if concrete was used, a variety of plastering and trowelling or coating with Stic B or Petrumite colours. For cheaper work, there was coloured asbestos, corrugated sheeting, or tiles, which might be used for both walls and roofs. The design of the roof determined to a great extent the design of the hangar. For small hangars up to 90 ft. span, an ordinary truss design would be economical. Such a design should provide for supporting a load up to two tons, in addition to the normal roof load, as all hangars should be provided with lifting tackle to take out engines for repair, etc. For larger spans, it was usual to divide the roof into bays of 50 or 60 ft. by lattice girders with smaller support trusses betwen them. A further method was to bridge the span with a lattice girder of box form, and run subsidiary girders from it to the rear wall. The Lamella system of construction was also particularly well adapted to hangar design.

Reinforced concrete hangars appeared to be popular in France, Italy, and to a lesser extent in the U.S.A. Some notable examples of light shell construction had been built on the Continent, and the designs employed would be worthy of emulation were it not for the fact that radical changes in the requirements of aviation compelled the use of some adaptable material for some years to come. Hangars of reinforced concrete with spans up to 150 ft. would probably be best designed as tied arches, while for larger spans a parabolic arch springing off abutment slabs from below ground level might prove a better design. The cost of hangar construction, either steel-framed or concrete, depended to a great extent on local conditions, but for rough estimating purposes for a 100 ft. span a figure of 2½d. per cu. ft. might be taken as a guide.

## Design of Buildings.

The two general principles which governed the design and lay-out of the buildings on an aerodrome were safety and efficiency. The ability to expand was a *sine qua non*. The buildings should be grouped along the lee side of the field in such a manner that there was no interference with any obvious flightway, and they should encroach as little as possible upon the landing ground. The buildings and related facilities for the airport should be planned and designed to meet the requirements of the particular aerodrome, and its operations. Safety demanded that they must be as low as possible, but the determined height must be consistent also with efficiency. In this new phase of structural activity, architects and engineers should collaborate.

The main block of a terminal airport should contain all the facilities of a modern railway station, and include first-class restaurant accommodation, booths for telegraph and telephone services, booking-hall, ticket offices, news stands and lavatories. It should also contain direction offices, postal and sorting office, a fully-equipped first-aid ward, Customs and police quarters with detention room, space for air navigation companies, pilots' quarters, cubicles and storage for parachutes. Dominating the building and indeed the whole site of the airport would be the control tower. Here would be housed the control station, radio and meteorological offices. To provide adequately and yet economically for such a multiplicity of activities required great mental concentration, and close study of the problem in consultation by the engineer, the architect, and the aeronautical expert.

# NOTES ON CURRENT LAW CASES

## RIGHTS-OF-WAY TO SEA: DEDICATION AND "TERMINUS."

Some very interesting points in connection with rights-of-way over private land leading to the sea were raised in the recent case William—Ellis *v.* Cobb and Others (1935, 1 K.B. 310) in the Court of Appeal, but it is important to note that as neither the Attorney-General nor the County Council were parties to the proceedings, no question of public right could be determined in this action, but only the rights of certain persons who in this action claimed to use the ways as of right. The land over which the two rights-of-way were claimed was a headland on the Carnarvonshire coast, one pathway leading to a gap in the cliff by which access could be obtained to the sea, which at high-water came up to the cliff, and the other to a small cove where a path led down to the sea, and the classes of persons claiming the right by user over a period extending "during living memory" were: (1) sailors who landed from vessels riding in the roads to purchase potatoes and other things; (2) tenants of grazing land on the islands off the coast, who landed or embarked from both points for the purpose of bringing or taking sheep; (3) mariners, who yachting off the coast, landed at the cove; (4) summer visitors, who used one of the paths for the purposes of bathing, paddling or fishing, and (5) local fishermen, who caught lobsters and placed them in the cove and then carted them away along one of the pathways.

The action was for trespass, seeking an injunction against the defendants, and the County Court judge had decided in the plaintiff's favour, awarding him damages £5, and granting an injunction, and this was an appeal from that decision; but as was pointed out in the judgments in the Court of Appeal, this being an appeal from the County Court, the Court had no power to alter the decision on the facts, but had only power to refer the case back, if it was found that the judge had based his decision on erroneous views of the law.

It will be seen that the case is of interest, as access to the coast has in many cases become difficult since the paths formerly used by the coastguard have been abandoned, but complicated points were raised, and we propose to refer only to two of them. In the first place it must be noted that the property had been in strict settlement from about the year 1856 to 1908, and consequently during that period there had never been an owner capable of dedication, so that on that ground the presumption of dedication arising from user could not be rebutted. The County Court judge had held that there having been no person capable of dedication so far back as "living memory" extended, he was not entitled to infer dedication from the period of user in that period, but from the judgments of the Court of Appeal he appears to have limited the possibility of dedication to the period when the land was in strict settlement, and it had been admitted that on the true construction of the various settlements, between 1820 and 1856 there had been a period when there was an owner capable of dedication. Upon this point the Court held that the finding of the County Court judge involved an error in law, for if user is established over a period within living memory, that raises a *prima facie* presumption of dedication, the date of which may be in a period beyond living memory, and Lord Wright quoted a passage from a judgment in Stoney *v.* Eastbourne Rural District Council (1927, 1, Ch. 367) to the effect that it is dedication and not user which constitutes a highway, and user is merely the evidence that proves dedication; where the only user shown is user over a less period than that covered by living memory, that may be a good ground for coming to the conclusion that dedication took place only just before the time at which user began; but where the user took place over the whole period covered by living memory, such user is just as good evidence of a dedication made a hundred years before the first proved act of user as of one made contemporaneously with that act.

There were other points in the case as to possible interruption of the rights which we need not refer to, the next point of general interest being whether the decision of the County Court judge that the claim to the rights of way by the defendants was defeated by the paths having what he termed no public terminus. On this point the Court of Appeal held that it is no longer law (if it ever was so) that a highway must end in another public highway, as a right of way may be proved over a way even if it does not lead to a public place (Moser *v.* Ambleside Urban District Council (1924, 89, J.P.118)), a case in the Court of Appeal in which one of the Lords Justices laid it down: "I think you can have a highway leading to a place of popular resort even though when you have got to the place of popular resort which you wish to see, you have to return on your tracks by the same highway, and you can get no further either by reason of physical obstacles or otherwise." The Court also referred to cases showing that a public right of way may lead only to a point of natural beauty, or to a church or a river, or to the sea. As regards the sea, the County Court judge had decided that the sea, which is a highway, could not in law be a terminus *ad quem* to a public right of way, because the sea can only be reached at high water from what is claimed as the end of the way, and the public have no right of crossing the foreshore, which at the places in question was presumably vested in the Crown, and was not the property of the owner of this land; but the Court of Appeal did not consider it necessary to decide the rights of the public over the foreshore in any detail because of the above finding that the sea may be a terminus to a public way (see Tyne Improvement Commissioners *v.* Imrie and Others (1899, 81, L.T.118)) per Phillimore.

We cannot leave this subject of rights of way over the cliffs and foreshore without quoting some general observations made in the Courts on the subject. In Behrens *v.* Richards (1905, 2 Ch. 614), where questions were raised as to stopping up some rough tracks on the Cornish coast, and where the defendants had forcibly removed the obstruction, the Court, though making a declaration that there was no public way, and imposing nominal damages on the defendants, pointed out that nothing worse could happen in a free country than to force landowners to be churlish about their rights for fear that their good nature may be misunderstood, and to drive them to prevent the enjoyment of things which, although they are matters of private property, naturally give pleasure to others, and that however lengthy the indulgence may have been, a jury ought to be warned against extracting out of it an inference which is unfavourable to the person granting the indulgence. (See also Blount *v.* Layard (1891, 2 Ch. 691).) The Court then observed that in permitting persons to stray along the cliff edge or wander down the cliff face, or stroll along the foreshore, the owner of the land was permitting nothing injurious to him, and refusal on his part would be churlish and unreasonable, but from such user nothing should be inferred, for if it were, a landowner would be compelled to prohibit such user, lest at some future date, when development took place, he should be prevented from laying out his estate as he was minded to do, because rights of highway existed. These observations deserve the attention of both landowners and the public.

In the case we are considering, as in other cases, such as Behrens *v.* Richards, the Courts have indicated that where the plaintiff has suffered no injury nor been in any way prejudiced by what the public have done, and the public have not been in any way abusing what they conceived to be their rights, an injunction should not be granted as a matter of course.

## WORKMEN'S COMPENSATION: SECOND ACCIDENT.

An important decision has been given by the Court of Appeal under the Workmen's Compensation Act, 1925, in the case, Thompson *v.* London and North Eastern Railway Company (*The Times*, March 6), for it alters the law, as stated in the current edition of Willis's Workmen's Compensation at page 226, "that compensation under the Act is not given for accident, but for injury, and that incapacity is one and indivisible, and it can never be more than total incapacity, however numerous the injuries." That statement was made by the learned author on the authority of the case M'Kinstrey *v.* Auchinlea Coal Co. (1920, S.C. 75), which the Court of Appeal have now overruled. The facts of the case are that the applicant, who originally had been employed by the railway company as a smelter, had in 1921 sustained an injury by accident to his hand, totally disabling him for a period; but subsequently he made a partial recovery, and the company employed him as a labourer at 40s. 4d. a week, plus 19s. 6d., which was the amount of compensation he was entitled to for his partial incapacity. His original wages had been £4 4s. 9d. In February, 1934, the applicant had sustained a second accident to the same hand which totally incapacitated him for two months, and the compensation for this, calculated under the Act of 1925, was 22s. 7d. a week. By section 9 of the Act of 1925, sub-section (1) (c) it is provided that in case both of total or partial incapacity the weekly payment shall in no case exceed thirty shillings. Before this Act came into force the limit was one pound, and the Act of 1925 came into operation May 1, 1926, but by section 50, the 1925 Act was not to apply in any case where the accident happened before January 1, 1924.

The railway company, no doubt relying upon the decision in the above case of M'Kinstrey, that the compensation was not for the injury but for the incapacity, contended that they were not liable to pay the workman both the 19s. 6d. and the 22s. 7d., but only the maximum amount prescribed by section 9, viz., 30s., and the County Court judge, sitting as arbitrator, had accepted their contention. The Court of Appeal, in overruling the decision of the County Court judge, dissented from the principle laid down in the M'Kinstrey case that the compensation was not for the injury but for the incapacity, and that incapacity was one and indivisible, and on the principles laid down in two cases, Harwood *v.* Wyken Colliery Co., Ltd. (1913, 2 K.B. 158) and Hodgson *v.* West Stanley Colliery Co., Ltd. (1910, A.C. 290), held that the limit on the amount of compensation was in respect of the accident which was under consideration when the payment was awarded, and in this case the workman was entitled to both the amounts.

---

### Property Repairs and Income Tax.

In the course of a letter on this subject, Mr. W. T. Fry writes as follows: "During the recent years of depression owners of property have spent only the minimum amount on repairs. Now that there are signs of increasing prosperity many owners are undertaking repairs and redecorations which would normally have been carried out earlier. It is not generally known that repayments of income tax are often obtainable in these circumstances. Property maintenance claims can be made for a period of six years where the amount spent in maintenance, repairs and insurance on an average of five years exceeds the statutory allowance for repairs, and are often for substantial sums. This is particularly the case where large estates and old properties are involved. Special provisions and concessions apply to properties which have not been owned for as long as six years."

# LAW REPORTS

KING'S BENCH DIVISION.
Before MR. JUSTICE HORRIDGE.

## ACTION FOR ALLEGED BREACH OF STATUTORY BUILDING REGULATIONS.

### Dibdin v. Prestige and Co., Ltd.

This was an action by Mr. George James Dibdin, of 22, Binsdale-road, Fulham, S.W., to recover from the defendants, Messrs. Prestige and Co., Ltd., building contractors, of Grosvenor-road, S.W., damages for personal injuries sustained by him through the alleged negligence of defendants.

The plaintiff's case was that when working for the defendants on September 17, last year, on the construction of some flats at "King's Court," Hammersmith, W., a half-brick fell from above on to his head, in consequence of which he sustained a fractured skull. The plaintiff alleged that the defendants were responsible for the injury he had suffered by reason of having acted negligently in not having complied with Regulation 31 of the Building Regulations, dated June 21, 1926, made by the Secretary of State under section 79 of the Factory and Workshop Act, 1901. This Regulation was as follows :—"Any part of the premises in which any person is habitually employed shall be covered in such a manner as to protect any person who is working in that part from being struck by any falling material or article."

The defendants denied that they were guilty of any breach of their statutory duty or of any negligence. They alleged that if there was any negligence it was committed by their servants, who were reasonably competent to carry out their duties.

At the conclusion of the evidence and the addresses of counsel, his lordship gave judgment for the plaintiff and awarded him £668 damages and costs. In the course of his judgment he said that the facts of the case showed that the accident to the plaintiff did happen on premises which came within the definition of the Building Regulations, viz., premises on which machinery worked by steam, water or mechanical power were temporarily used, and that being so, Regulation No. 31 applied, and defendants were liable.

KING'S BENCH DIVISION.
Before MR. JUSTICE MACNAGHTEN.

## RIGHT-OF-WAY ACTION AGAINST BUILDER.

### The Weavers' Co. v. Petty.

A settlement was arrived at in this action which was brought by the Weavers' Co. against Mr. Frank Petty, a builder, of Malford-grove, Snaresbrook, Essex, for an injunction and damages.

The plaintiffs' case was that in 1882 the grant of a right-of-way over land at the rear of the almshouses at Wanstead was made to them by the Epping Forest Conservators. The plaintiffs had a prior use of it as a means of access to their property until June, 1933, and then they complained that Mr. Petty, the defendant, had constructed a new road over the right-of-way to an estate which he was developing, and this had destroyed the amenities and privacy of the plaintiff company's property.

Mr. Petty denied that the defendants were entitled to the relief which they claimed, contending that the grant of 1882 to the plaintiffs was *ultra vires*. Mr. Petty further alleged that he had a licence from the Conservators to make the new road, and that he had been granted facilities in regard to the right-of-way.

Mr. Croom-Johnson, K.C., for the plaintiffs, said that since the adjournment of the hearing of the action the parties had been in negotiation and had settled the action. The order he asked for was an order to stay the proceedings in the action on the terms which had been agreed.

Mr. Justice Macnaghten assented, and an order as asked was made an order of the Court.

# INSTITUTION OF SANITARY ENGINEERS

## CORROSION OF CAST-IRON PIPES.

A PAPER on "The Manufacture of Cast-Iron Pipes, with Special Reference to Corrosion," was read by Mr. Percy H. Wilson, M.I.Mech.E., at a sessional meeting of this Institution, held at Caxton Hall, Westminster, on Friday, March 22, the President, Mr. W. E. Blizard, B.Sc., occupying the chair.

Having dealt with his subject historically and practically, the lecturer came to the question of Corrosion and its Prevention. It was, he said, difficult to go beyond generalisations, and as it was recognised that, in combating corrosion, so much depended on local conditions, owing to the time at his disposal only a brief survey of the subject could be given. Corrosion under normal conditions should not be regarded as a form of deterioration which, sooner or later, was bound to occur. When laid under favourable conditions, cast-iron pipes would last for an indefinite period without corrosion, even when uncoated. There were certain conditions, however, which necessitated the employment of protective coatings and other precautionary measures.

The various theories of corrosion fell under four main headings as follows: (1) the acid theory of corrosion; (2) the older electro-chemical theory; (3) the "Colloidal" theory by Friend; (4) the newer electro-chemical theory. The most serious causes of external corrosion were electrolysis and soil corrosion.

*Electrolysis.*—This was usually due to the fact that cast-iron and steel mains formed conductors which were likely to pick up stray electric currents. The effect of electrolysis was most severe when the current passing through a main was continuous, corrosion occurring at the point where the current left the pipe. Alternating currents were more difficult to detect, as they could enter and leave the pipe at the same point, but their effect was only about half that of a direct current. Several currents could pass through the main at the same time, intensifying or neutralising corrosion according to whether they were travelling in the same or opposite directions. To guard against electrolysis of that type, care should be taken to prevent where possible the use of cast-iron and steel mains as earths for power and lighting installations. While such earths were only used for conducting leaking currents away from faulty fittings, an escape of moderate amperage might pass undetected for a period long enough to affect the pipe. Proper and efficient earth plates should be provided by all electricity concerns, and earthing connections should not be made to pipe lines.

In the case of electric overhead tramways, current was supplied through the overhead wire and the return circuit through the rails. A feeder wire at intervals increased the conductivity of the circuit, as leakages might occur even when the rails were welded together. If the resistance at the rail connections was greater than that through the earth to an adjacent pipe, then the current would flow from the rail to the pipe. It would then travel along the main until it reached some point where the resistance in the pipe was greater than the outside resistance. The current would leave the pipe at that point and corrosion would occur. It was therefore important that the conductivity of the main should be as continuous as possible.

Electrolysis was caused not only by stray currents, but also by reason of the difference in the electric potential existing between different metals, or between different parts of the same metal. That type of self-contained electrolysis was both chemical and electrical, and was due to soluble salts in the soil forming an electrolyte. When this electrolyte was in contact with the metalloids in the iron and the iron itself, a series of galvanic batteries was formed, which set up an internal current and intensified corrosion. That self-contained electrolytic action was intensified if the moisture in the subsoil was acid or alkaline. It had been found that the dense-grained spun metal had a better conductivity and therefore a greater resistance to self-contained electrolysis than open-grained sand-cast metal.

*Soil Corrosion.*—This type of corrosion was met with where pipes were laid in clay. When the water percolating from above was not able to penetrate through the clay it collected round the bottom section of the pipe. Salts taken into solution, such as gypsum (calcium sulphate), found for instance in the London clay, provided a very efficient electrolyte which brought about corrosion of the pipe. This action was liable to take place where the coating might have been severely damaged and the electrolyte solution came into contact with the exposed metal.

Again, pipe-lines laid in ashes and cinders were liable to be attacked by the sulphuric acid formed from the action of the moisture in the soil with the sulphur compounds in the ashes. Generally speaking, pipe mains laid in a well-drained chalky, sandy or sandy loam soil lasted many years longer than mains laid in clay soils, unless adequate protection was provided in the case of the latter.

The internal corrosion of mains was usually due to oxidation or rusting caused by the combination of the iron with the oxygen content in the water and sewage. This oxidation was accelerated by the presence of carbonic acid and sulphur compounds. One form of $CO_2$ corrosion was known as "cavitation," so named because it caused local cavities in the metal. Where liquids contained a large amount of dissolved oxygen and free carbonic acid, there was always a danger of these gases being released and, if that occurred in mains only partially full, those gases would attack the upper portion of the bore of the pipes. Another serious trouble was that of incrustation or tubercular growth. This applied more particularly to mains carrying soft or peaty waters or water containing bacteria. As these bacteria did not produce tubercule incrustation on calcarious material, concrete lining was recommended.

### Protective Coatings.

Generally speaking, the most effective method of protecting pipes against the action of corrosive soils was by coating them with a bituminous solution. This practice was first introduced by Dr. Robert Angus Smith. His original patent specification for the "Application and Preparation of Coal Tar to the Interior of Water Pipes" was dated October 19, 1848. The original mixture of this material was "30 galls. coal tar, 30 lb. fresh-slaked lime, 6 lb. tallow, 3 lb. lampblack, 1½ lb. resin, well mixed, boiled for 20 minutes and put on hot." An equally satisfactory mixture which was used to-day consisted of four parts of crude gasworks tar to one part of tar oil or anthracene oil. As some of the ingredients in the mixture volatised at certain temperatures, it was important that the temperature of the tanks be properly controlled.

Under certain conditions, a double coating of this material was recommended. This was done by immersing the pipes into the tank a second time after the first coating had drained off and become partially set.

In exceptionally bad conditions, where pipes were laid in acid soils and clay soils containing calcium sulphate, special protection was necessary. In these cases, the pipes were provided with a thick coating of specially filled bitumen, which was applied to the pipes at Stanton by a patented process, the coating being rolled on under pressure without the use of any reinforcing material, which in time would be liable to disintegrate the coating. Iron pipes were also lined with concrete for special conditions. The graded concrete was introduced into the bore of a revolving pipe, the centrifugal action serving to distribute the concrete evenly over the surface of the pipe. The lined pipes were matured for some time before putting into service. The concrete formed a good bond with the iron pipe and did not break away even when the pipe was fractured. For effluents containing considerable percentages of acids, where ordinary concrete would not be suitable, a special acid-proof lining might be used.

# BOOK REVIEWS

*Westminster Abbey.* By A. L. N. Russell, F.R.I.B.A. London: Chatto & Windus. Price 6s. net.

To the many guides to, and histories of, Westminster Abbey, this useful history and guide, written by the architect to Westminster School, has just been added. The work is divided into two parts, the first telling the story of the Abbey and its abbots, its building and maintenance, and giving an account of the life of the mediæval monks; and the second part consisting of a guide to the many interesting and historical features of the building, as well as chapters on the principles and development of mediæval architecture. Following a brief Foreword by Mr. Lawrence E. Tanner, M.V.O., M.A., Keeper of the Muniments of the Abbey, and the usual Introduction, the author tells the story of the Abbey in a way which cannot fail to be of interest to students of architecture as well as the historian and the intelligent visitor. The story is well told and includes many interesting details which make pleasant reading. The book includes a number of illustrations, with a plan of the Abbey printed on the inside of the front and back cover of the book—a very convenient arrangement for a plan of this kind, which is so frequently referred to by the visitor, and should enhance the usefulness of this history and guide.

*Hutchinson's Technical and Scientific Encyclopædia.*—Edited by C. F. Tiveney and I. P. Shirshov, A.M.I.E.E. In three volumes. Vol. 1: A to Direction-finding. London: Hutchinson and Co., 34, Paternoster-row, E.C.4. Price £1 8s. each volume.

However well-informed the public, including those who belong to the professional classes, may be, dictionaries and encyclopædias are to-day indispensable in view of the constant advances and achievements of science in its application to art and industry. Such works are constantly needed by students and teachers, the learned professions, business men and manufacturers, and the information needed must be in an accessible form and quickly obtained. The book before us has been termed an encyclopædia because of the alphabetical arrangement of the subjects dealt with, but the treatment of each subject and the data, formulæ and tables, make it a handbook of practical information for everyday use. Terms and apparatus incidental to the arts and sciences, industries and trades are defined and described, some of the descriptions running to considerable length, and, where necessary, being illustrated. We agree with a statement made in the brief preface that such a mass of information presented in this convenient form could be found only in a library containing thousands of volumes which are not often within reach of people, and access to which cannot quickly be obtained. The work covers a wide field, and is intended specially for "the ever-growing public who desire to keep in touch with modern progress," and with "processes that will enable them to understand how science is applied in industry." In this first volume, architectural and building terms are given and described, as well as comprehensive information and data relating to other arts or sciences, the work covering "the whole field of Physics, Astrophysics, Meteorology, Horology, Electrical Communication; the whole field of Chemistry, Geology, and Mineralogy; Crystal Structure and Radioactivity; the new sciences Oceanography and Geophysics." Other subjects include the science of Aeronautics; the making of Cinema Films; the Carbonisation of Coal; the manufacture, properties and uses of metals; Gems, Watch-and Clock-making and Jewellery; Ship Construction; Fuels, Welding Processes. These and other subjects are all fully dealt with, and it will be realised even from this short description of the work how comprehensive it is and how useful it should be to all those who are in search of information relating to the arts, sciences and manufacturing industries and skilled trades. The work will include a working bibliography, naming three thousand books and other sources of information.

*Price Book for Approximate Estimates for Army Buildings (Engineer Services).* H.M. War Office (Q.M.G.XI). H.M. Stationery Office. Obtainable from H.M. Stationery Office or through any bookseller. Price 3d. Postage extra.

It is significant that H.M. War Department should have come to the conclusion that the method of preparing preliminary estimates for new buildings by cubing does not yield sufficiently accurate results for inclusion in the Annual Estimates. If this method cannot be successfully applied to typical construction, it certainly cannot be relied upon to provide a close approximation to accuracy in the case of the many diverse forms of building construction dealt with in civil practice. A more reliable estimate is obtained by "taking off" and pricing "rough quantities," but this takes up a good deal of time, and requires much experience of those doing the pricing.

To meet these difficulties, a small price-book, giving inclusive rates for the types of construction met with in ordinary War Department buildings, has been prepared, and a method of taking out very rough quantities is therein described. Only in exceptional cases can either the method or the pricing be applied to other than War Department buildings, and to those only with informed discretion. The book seems, however, to be well adapted to staff requirements, and it also contains information likely to be of service to contractors on the War Department list.

*Report on the Treatment of Welded Structures by the Metallic Arc Process.* London: The Institution of Structural Engineers. Price 5s.

This report, prepared by a panel of members appointed by the Institution of Structural Engineers, is composed of four parts. The first part gives a general description of the process, including the behaviour of the arc, the effect of using covered electrodes, and of the welding position. It also contains interesting information upon the amount of current to be used with the various sizes of electrode, and the elimination of distortion.

The second part is described as a metallurgical study of welding, and includes a considerable number of photographs, photomicrographs, and X-ray photographs of welds. The third part describes the results of tests on a welded truss, two welded girders, a welded stanchion, a riveted truss, and a riveted girder. More particulars of the stresses in the members and the welds would have added to the value of this portion of the report.

The fourth and last part consists of recommendations for the control of metal arc welding in steel structures, which include rules for design and tables of the strength of various welds. Those new to the subject will find the first two parts very interesting and helpful in understanding the operation of arc welding, whilst the last part should prove useful to the designer.

*Houses Planned for Comfort.* Third Edition. By G. Gordon Samson. London: Crosby, Lockwood & Son, Ltd. Price 4s. 6d. net.

This book deals with home conveniences which, in the opinion of the author, could do much in prolonging the usefulness and happiness of the aged and invalids among us. The crux of the book is the provision of a "sick room" or "hospital room" in every house. This, complete with offices and anteroom, suggests expensive comfort for anyone who was really exceedingly sick, but one feels that a normal family would be a good deal healthier if sickness were less obviously expected. The advice as to fittings is often conveniently backed with the names and addresses of the firms who supply them. Figs. 61, 70, 74, 75, and plates IV, V and VI illustrate external views in the architectural style now known as "Tudorbethan." The other elevations might be described as 1890 rococo.

# BARTLETT SCHOOL OF ARCHITECTURE

## B.A. DEGREE DESIGNS.

For the B.A. Degree in Architecture, 1934-35, Part I Examination, there were ten entries, five passing in the first class, three in the second, and one in the third. The subject was "A National Medical Centre Providing Accommodation for 500 Patients." Designs were required for buildings planned with several floors, and flat roofs for sunbathing, three operating theatres and all other essentials for a hospital of this description. The problem was a difficult one, demanding considerable experience and study. The designs and drawings now on exhibition at University College, Gower-street, reach a high level both as regards planning and elevational treatment, and as far as can be judged the plans are direct and efficient in lay-out. Yet they vary in the placing of the various blocks. The elevational treatments are on sound, modern architectural lines, recognising the vital essentials of light and air. Amongst the many excellent schemes submitted Mr. Robinson's has what is known as an architectural character in its lay-out, with a central entrance hall forming a dominating feature in the main elevation. Another excellent design is that by Mr. Block, which is thoroughly worked out, and is shown by a fine set of working drawings with a good half-inch detail. The scheme submitted by Mr. Ling is an ambitious one, with striking elevations and a tower, some 200 ft. high, rising from the semi-circular treatment of the administration block. This tower contains a series of doctors' rooms, one above the other, with a water tank at top level. The scheme would be a costly one, but the whole design has originality, shown by a finely rendered set of drawings. Mr. D. E. Morrison's design has many good points, as have others. All the schemes show thought and application, whilst the delineation of the small- and large-scale drawings was excellent. The examiners were Professor A. E. Richardson, Mr. H. O. Corfiato, and Mr. C. Lovett Gill.

# SOANE AND TITE PRELIMINARY COMPETITIONS

In the United Kingdom 114 students took part in the preliminary competition for the Soane Medallion, and 246 students took part in the preliminary competition for the Tite Prize. The following students have been selected to take part in the final competitions:

### The Soane Medallion.

Mr. T. A. L. Belton (Sch. of Arch., Univ. of Sheffield).
Mr. Philip E. D. Hirst (Liverpool Sch.).
Mr. Andrew S. Hood (Sch. of Arch., Edinburgh Coll. of Art).
Miss Anne W. R. Parker (A.A., London).
Mr. Joseph W. Pickering (Sch. of Arch., Hull College of Arts and Crafts).
Mr. Cecil G. Stewart (Sch. of Arch., Edinburgh Coll. of Art).
Mr. Kenneth Warman (Leeds Sch. of Arch.).
Mr. Norman C. Westwood (A.A., London).
Mr. Ralph R. Wilkins (A.A., London).

### The Tite Prize.

Mr. Vernon R. Abbott (Armstrong Coll. Sch. of Arch. (Univ. of Durham), Newcastle-upon-Tyne).
Mr. Christopher H. M. Bompas (A.A., London).
Mr. Alexander M. Graham (Sch. of Arch., Edinburgh Coll. of Art).
Mr. R. A. B. Hitch (A.A., London).
Mr. Charles H. Hyde (Birmingham Sch. of Arch.).
Mr. A. H. H. Jenkins (A.A., London).
Mr. James T. Latheron (Armstrong Coll. Sch. of Arch. (Univ. of Durham), Newcastle-upon-Tyne).
Mr. Arthur G. Ling (Bartlett Sch. of Arch., Univ. of London).
Mr. W. M. T. Pattrick (A.A., London).
Mr. Paul K. Pope (R.W.E. Academy Sch. of Arch., Bristol).

# ARBITRATION IN BUILDING DISPUTES—XII

By W. T. CRESWELL, K.C.

## REMUNERATION OF THE ARBITRATOR.

As already indicated, it is usual in building disputes that the arbitrator is a professional man—that is, an architect, surveyor or builder. And in the matter of remuneration, a professional man undertaking the duties of an arbitrator, without any express contract as to his fees, cannot reasonably be presumed to be intending to give his services gratuitously. If this contention is advanced, he is therefore by implication entitled to recover payment for his services by bringing an action, on an implied provision by the parties that they would pay him reasonable remuneration. See Macintyre Bros. *v.* Smith (1912), 50 Sc. L.R. 261. Also, it still remains that if there is an express agreement by the parties that they will pay the arbitrator's fees, or any named fee, and they fail to do so, the arbitrator can maintain an action to recover at least a reasonable remuneration. See Hoggins *v.* Gordon (1842), 3, Q.B. 466. An arbitrator cannot necessarily recover remuneration on the basis of any particular scale of fees set up by any private or professional body unless that scale of fees has been included in an agreement; and possibly even then the parties may be able to show he has failed to earn the scheduled fee, for, in general, the Court will only grant him reasonable remuneration.

The old practice of an arbitrator claiming a lien on the award and withholding it till his remuneration is paid is now controlled by the new Arbitration Act of 1934. This gives the Court a direct jurisdiction over an arbitrator's fees. Arbitrators can no longer exact exorbitant fees. Under Section 13 of the Act of 1934, unless the fees have been agreed beforehand, should an arbitrator refuse to deliver up the award except on payment of his fees, either party to the reference may obtain an order from the Court ordering the arbitrator to deliver up the award on the applicant paying into Court the fees demanded. The order of the Court may further direct that the fees demanded by the arbitrator are to be taxed by a taxing master of the Court, a reasonable sum being paid to the arbitrator, and the excess, if any, being paid back to the party making the application. This is the remedy now open to the party who feels that the fees of the arbitrator are excessive; but the arbitrator is entitled to appear before the taxing master to uphold his claims on taxation or review of taxation under Section 13 of the Act of 1934. Arbitrators generally will welcome the provisions of this section of the new Act. It has very special reference to the many and widespread discussions anent the comparative costs of arbitration and litigation as alternative means for the settlement of disputes. Arbitrators can do much to popularise arbitration in building disputes by keeping down, not only the costs of the reference, but also their own remuneration to reasonable figures.

The new Act does not expressly deal with fees of arbitrators previously fixed by agreement. An arbitrator can, alternatively, fix by agreement that a deposit on account of his fees shall be paid to him previously to entering on the reference or at any other juncture.

As previously stated, an arbitrator, even when his fees are fixed by a written agreement, can only recover what is reasonable; but if any party thinks them unreasonable, he might, by an action, recover fees paid in excess, on the grounds that they had been paid for a consideration which has failed. If the amount of the fees agreed upon are included in the award itself, any party to the reference may move the Court to set aside the award, or such part of it as relates to the arbitrator's fees.

## Enforcing the Award.

If any party refuses, or unduly delays, to carry out the provisions of the award, then, under section 12 of the Arbitration Act, 1889, the award could, by leave of the Court, or a judge, be enforced in the same manner as if it had been a judgment or order of the Court. This did not, however, create a *final* judgment of the Court. Now, under section 10 of the Arbitration Act, 1934, once leave is given under section 12 of the Act of 1889 to enforce the award as a judgment or order of the Court, the Court has power to enter final judgment at once in terms of the award.

The award is enforced by either (1) the issue of a writ of execution which is the usual and quickest method available; (2) a writ of attachment, which is the seizing of the offender himself as well as his goods; (3) an action in the Court based on the award, since every award is enforced by action in any Court of competent jurisdiction; (4) by an action for specific performance. When the arbitration agreement is oral, the only available method of enforcing an award is in an action in the Court.

Leave is only given by the Court in clear cases. If the case is doubtful the Court will leave the party to seek his remedy by an action in the Court on the award. See Grech *v.* Board of Trade (1923), 130 L.T., 35 C.A. The greater weight of authority favours the view that an action *re* an award, the action is founded not on the award, but on the agreement to submit the difference from which the award results. See Bremer, etc. *v.* Drewry (1933), 1 K.B., 753 C.A.

Some statutes provide the manner in which an award is to be enforced, and in general, in the case of an award giving compensation for lands taken compulsorily under a Statute, the proper remedy is in an action in the Court.

A respondent may make this answer to an application for lien to enforce an award, that the award is a nullity, or is in part or wholly *ultra vires*, or is bad on the face of it. If, however, it is alleged that the award was improperly procured, or that the arbitrator misconducted himself, he must move the Court to set aside the award. See Bache *v.* Billingham (1894), 1 Q.B., 107. A similar course should be followed in the case of an oral arbitration agreement, or if the party on whom the award is to be enforced is outside the jurisdiction of the Court.

# THE STANDARD METHOD OF MEASUREMENT*

ALL who are engaged in the building industry will be interested to know that the third edition of the Standard Method of Measurement of Building Works is published to-day, March 29. The official date of the issue will be September, 1935, but the document is being published six months in advance to enable the industry to assimilate the changes from the earlier editions. This third edition incorporates extensive revisions, which have resulted from two years of deliberation by the joint committee responsible for preparing this work and keeping it abreast of modern practice. As an indication of the thorough manner in which the work of revision has been carried out, it may be mentioned that the joint committee has investigated over 2,000 suggestions that had been submitted by surveyors, contractors, sub-contractors, and others. In broad terms, the third edition seeks to bring the Standard Method of Measurement into conformity with what is actual modern practice. It provides for the measurement of the latest forms of construction, special attention having been given to such matters as reinforced concrete work. Again, in the important trade of the mason, whereas the first edition was drafted in the light of hand-worked stone (when all labours were required to be measured in detail), the revised edition acknowledges the use of stoneworking machinery by providing that stonework shall be measured to include all labour, but indicates the method by which the work shall be classified.

The extensive revisions incorporated in the third edition have been rendered necessary, however, not only by new methods and processes of construction and the growth of mechanisation in the industry (which have rendered some of the older practices of measurement either impracticable or obsolete), but more particularly by the fact that the Standard Method of Measurement is now for the first time generally incorporated in the legal documents which comprise building contracts. Clause 11 of the Standard Form of Building Contract (published by the R.I.B.A. in 1931 as the result of agreement between that body and the National Federation of Builders) provides that bills of quantities "unless otherwise stated shall be deemed to have been prepared in accordance with the Standard Method of Measurement of Building Works last before issued by the Chartered Surveyors' Institution." Thus, instead of being merely a guide to the best practice, the Standard Method of Measurement has become an authority to be quoted, if need be, in the Courts of Law. The joint committee has been fully alive to the change which has thus been necessitated in the character of this work.

So completely does the third edition differ from the two earlier editions that these may now be regarded as obsolete, and it will be necessary for all surveyors, builders and others who use this work of reference (that is to say, all who are actively interested in building contract works), to replace their present edition by a copy of the one about to be published.

For many years all students taking the subject of quantity surveying in the examinations of professional and educational bodies have been required to possess a knowledge of the Standard Method of Measurement. To this end the document has been adopted as a text-book by most technical colleges where classes are available for surveying and building students. Thus the younger generation of quantity surveyors and builders are growing up in the tradition of the Standard Method of Measurement, and "the diversity of practice" to which reference is made in the preface of the first edition is gradually becoming a thing of the past. The effect of this ought to make possible more scientific tendering, as it will remove any element of doubt that might exist in the builder's mind as to the manner in which the various classes of work will be computed and paid for.

The joint committee, which acts in an honorary capacity, is to be congratulated upon the thorough manner in which its labours have been completed. The Committee was composed as follows:—

Representing the Chartered Surveyors' Institution: Messrs. Percival F. Gleed (Chairman), A. G. Cross, R. H. Francis, S. L. Porter, Henry Vale, and Edward C. Harris (Hon. Sec.).

Representing the National Federation of Building Trades Employers: Messrs. Frank Woods (Bolton, Lancashire), Vice-Chairman; Raymond Bennett (Ipswich), G. Elvins (Birmingham), and William Lacey (London).

Representing the Institute of Builders: Mr. R. L. Roberts (London).

The book is printed on good quality paper, and, following the practice of the earlier editions, is printed on one side of the paper only. This leaves room for the practice notes of the users of the document.

* "The Standard Method of Measurement of Building Works." Third Edition. Obtainable from the Chartered Surveyors' Institution, 12, Great George-street, Westminster; the Federated Employers' Press, Ltd., 13, Russell-square, W.C.1; and leading technical booksellers. Price 7s. 6d. net, post free.

# INQUIRY BUREAU

## QUESTIONS.

### The Shoring of Buildings.

SIR,—Can any reader inform me of the regulation angle at which one is obliged to erect buttresses to support property after the removal of adjoining property? ESTATES.

### Depth of Foundations.

SIR,—Having determined the area of a concrete base required to carry a stanchion and the weight placed upon it, by what method can one quickly arrive at the depth of the proposed concrete base? Can any reader kindly assist? QUERY.

### Construction of Joiners' Shop Floor.

SIR,—Can you advise me whether there is any working rule or factory regulation which stipulates that the floor of a joiners' shop must be of wood, or, alternatively, that floor boards must be provided alongside the bench for the joiner to stand on?

DOUBTFUL.

### Plastering on Gauze: Rust Marks.

SIR,—On a job we are undertaking we are using a well-known fibre ceiling board, in conjunction with the plaster that the makers recommend, and, as instructed both by the architect and the ceiling board people, have covered the $\frac{3}{16}$ in. open joints with the recommended wire gauze. A couple of ceilings have been plastered, and they now show signs on the plaster face of the wire gauze below, which appears to be some form of rust from the gauze. This obviously must be corrected, and we shall be obliged to any reader who could give us any information as to whether they have experienced this form of trouble, and how they overcame same. Is it possible that a good distemper would have the necessary effect?

E. S.

### Stained Plaster.

SIR,—Twelve months ago the internal walls of a house were replastered and papered. Within a week wet patches appeared on all walls, and continued to come and go, irrespective of the weather conditions. A sample of plaster was taken and found to contain hygroscopic salts. The plaster of one room was then stripped, the brickwork cleaned and given a strong solution of sodium phosphate, the whole surfaces coated with pure bitumen and replastered with a patent plaster, and then repapered. Within two weeks the wet patches appeared again in places where they originally appeared. The external walls of the house are 18 in. solid, cement-rendered outside. The house has a basement, and an horizontal dampcourse was recently put in just below the ground-floor joists. Can any reader suggest the cause and a cure, other than battening out the walls? NORFOLK.

### Damp Fireplaces.

SIR,—Rain has come through above the fireplaces in two of the upper rooms of my house. I have had three builders in to advise, and they all recommend something different. The lead flashings have already been attended to. The roof is one of rafters, battens and English sand-faced tiles. One builder tells me that with this variety of tile I should have a close-boarded roof; another that the open roof provides opportunity for the woodwork to dry after rain. Both admit that a certain amount of rain will get between the tiles.

Other recommendations are: (1) To have the chimneys treated with boiled oil; (2) to have the chimneys taken down and a dampcourse put in; (3) to have the chimneys cemented; (4) to have the part of the roof close to the affected chimneys boarded in; (5) to have the whole of the woodwork sprayed with creosote

It seems that a certain amount of rain gets between the tiles, and runs down the rafters till it meets the chimneys, which are all on the outside walls. Why it occurs with two chimneys and not with two others puzzles me, except that the two where no trouble occurs are above rooms where there is generally a fire burning. I should be glad of advice.

C. E. S.

## ANSWERS.

### Making-up of Rating Assessments.

[ANSWERS TO "QUERY," MARCH 22.]

SIR,—In respect to shop premises rent, not profit, is the measure of rateable value. As to rent the problem is to ascertain what a tenant from year to year might reasonably be expected to give as rent.

There is no fixed method of determining the rateable value of premises, though most rating authorities have tables prepared to which they work.

For short tenancies, however, proceed as follows:—

| | | | |
|---|---|---|---|
| Rent per annum .... .... .... | £50 | 0 | 0 |
| Deduct amount allowed by Class IV, Part I, Schedule II, of the Rating and Valuation Act, 1925, *i.e.*, one-fifth of gross rent .... .... .... .... | 10 | 0 | 0 |
| Rateable value + Rates | £40 | 0 | 0 |

Taking the rates at 8s. 6d. in the £ we have the following proportion:—

| Rateable Value plus Rates in £. | | | Rateable Value. | | | Rateable Value plus Rates. | | | Rateable Value. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| £1 | 8 | 6 | £1 | 0 | 0 | £40 | 0 | 0 | £28 | 0 | 0 |

In the case of a lease for a term of years, where the tenant pays rent plus rates, insurance and executes repairs, etc., the following formula is often used to obtain the rateable value:—

$$R = I \times \frac{240}{240 + P + (240 \times A)}$$

Where R = Rateable value.
I = Inclusive rent paid.
P = Poundage of rent in pence.
S = Statuable deduction.
A = Rate of addition from rateable to gross, *i.e.*, $\frac{1}{4}$.

Applying this to a property bringing in an inclusive rent of, say, £52 per annum when the rates are, say, 5s. in the £ and the statutory deduction is one-fifth.

$$R = £52 \times \frac{240}{240 + 60 + (240 \times \frac{1}{4})}$$

$$= £52 \times \frac{240}{300 + 60}$$

$$= £52 \times \frac{240}{360} = \text{say } £35.$$

LEX.

SIR,—Methods differ somewhat in different areas, and a number of considerations are taken into account in making up assessments for rates. The actual rent received on a property is not the basis, though the fair rental value is one consideration. In other words, a property which is let at a rent above its value does not indicate that the rating assessment must be increased up to this point, nor will the letting of a property at a figure below its value produce cause for a reduction in an assessment. The condition of the property, its position and extent, are all factors which must be taken into account. An appeal against an assessment can only be carried if it can be shown that similar properties have been assessed at an appreciably lower figure.

RATES.

### Sound Insulation in Existing Building.

[ANSWERS TO "A. H. D.," MARCH 22.]

SIR,—The most likely method of insulating the upper floors of a completed building such as your correspondent describes would be to pave the upper floors with cork paving, which, I am confident, would materially reduce the nuisance, though not providing a 100 per cent. cure. Perfect insulation can only be attained by drastic and expensive structural alterations. NOISE.

SIR,—The office floors could be insulated acoustically by removing all fixtures on the floors and then laying the floor with an asbestos blanket, or blankets, so that the entire surface is covered. Floor boards can be fixed over the asbestos in the usual way, so that in effect it becomes a double wood floor with a layer of asbestos between. This will absorb a great deal of the noise. Panelling the office with some sound absorbent wood would give increased quietness, but the first-named precaution would probably give sufficient quiet. W. E. W.

### Hospital Roof Construction.

[ANSWER TO "HOSPITALS," MARCH 22.]

SIR,—I should prefer a method of insulating the roof by means of asbestos tiles bedded in bitumen upon three thicknesses of bituminous felt, whereby almost perfect insulation can be achieved at relatively low cost. There is a great advantage in this method, also, in that heat transference is checked at the top surface, keeping all structural members and layers under it at an equable temperature. The use of the plaster is not desirable except as a gauging, in that reverberation is excessive, leading to a noisy hospital ward, which is to be avoided. CONSTRUCTION.

### Defective Concrete Paths.

[ANSWER TO C. CROASDALE, MARCH 22.]

SIR,—It is probable that the aggregate was not clean, since a mix of one to six thoroughly incorporated would produce a sufficiently hard surface, taking into consideration the high quality of modern cement. The presence of loam in the sand would be sufficient to produce the defects described. If the top surface is well hacked and a thick layer of properly mixed cement and sand laid thereon, the defects should be remedied.

PAVING.

### Inaccurate Official Data: Question of Extra.

[ANSWERS TO "J. L. C.," MARCH 15.]

SIR,—If the information as to the position of the sewer was given before the contractor gave a quotation for the work, and the statement was definitely made and not merely an approximate opinion of someone, the contractor is entitled to charge extra for the additional work involved. When a contract is made to make an additional connection to a sewer, the position and depth of the sewer should be stated on the plans. A verbal statement as to the depth of the sewer would be sufficient to place liability on those placing the contract.

W. E. W.

SIR,—The sewer being found 9 ft. lower than your correspondent was led to believe does not, in itself, permit him to charge an extra, especially if in the quantities it merely asked him to "connect drains to sewer"; in this case the depth did not concern the owner and the onus of finding out rested with the contractor. Had it been specified to connect to sewer at a given depth, and the sewer was found 9 ft. lower, an extra could be charged. The fact that the Council may have told him that the sewer was 6 ft. down instead of 15 ft. places no liability on the owner, neither does it, in my opinion, commit the Council, as plans could have been inspected and the exact depth ascertained before tendering.

ROBERT H. WARNER.

# THE WEEK IN PARLIAMENT

### The Housing Bill.

Good progress was made by the Standing Committee of the House of Commons which is considering the Housing Bill.

Various amendments having been negatived or withdrawn,

On clause 44, which authorises local authorities with the consent of the Minister to invest temporarily in statutory securities money standing to the credit of their housing accounts, MR. DUNCAN proposed that the consent of the Minister should not be required. He said that representations had been made to him on this matter by certain local authorities. Surely the local authorities could be trusted in this matter.

SIR D. SOMERVELL said the Minister of Health accepted the principle of the amendment and would give effect to it in the report stage.

The amendment was withdrawn.

# THE BUILDING TRADE

## HOUSE DRAINAGE AND SANITARY PLUMBING—XIII

By J. R. TAYLOR.

### PIPE JOINTS (*continued*).

Diagram A shows a section of one of the joints to which reference was made last week. In this instance it was obvious that the joint had been made by an unskilful plumber, for too much solder has been used and the shaping is poor. The piping is tin washed inside, and is of the strength laid down in the water companies' regulations—7 lb. per yard run for the ½-in. branch, and 10 lb. for the ¾-in. main. The mark at X in the main seems to indicate that a gouge or hollow chisel was used to cut the hole receiving the branch; that at X in the branch was probably made by the end of a bolt used for opening the pipe end. At both these points and at the exposed edges of the pipes some corroding action has taken place, due to loss of protection through the break in continuity of the tin. The preparation of the joint does not seem to have been done with a shave hook, and probably a heavy clasp knife was used, and more lead has been removed than was necessary. But plumbers of greater skill, when using the shave hook, are sometimes too heavy handed, and some much weaken the pipe by forming a V round it by using too much pressure. The worst defect in this instance is the intrusion of the branch end into the inside of the main, for this seriously diminishes the effective bore. This is a fault to which some plumbers are prone, and often the tail ends of brass bib-cocks are pushed even further in than is this branch end.

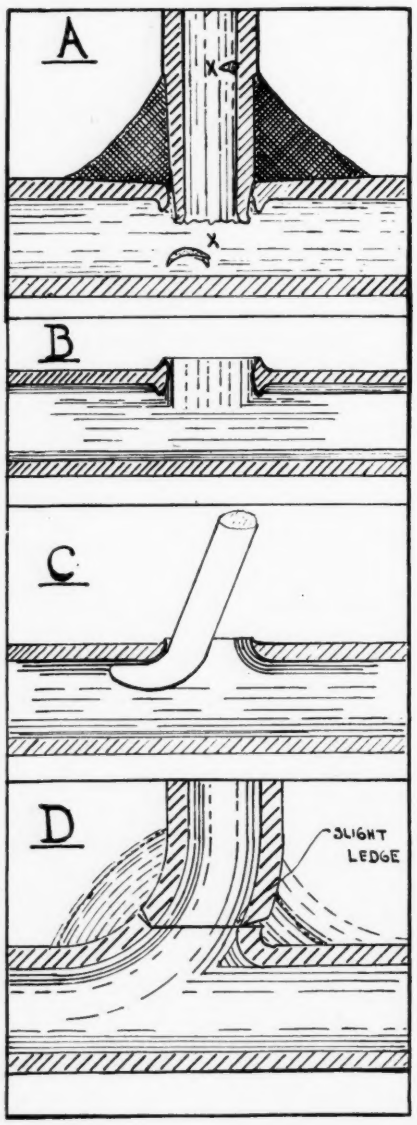
Diagram B illustrates a common defect; it is usually the result of the application of a straight bolt entered for the purpose of enlarging the hole first made, the bolt being pressed against the edge and moved round with a sort of stirring action. Sometimes a hammer is used to tap the side of the bolt while held vertically, and sometimes a tan-pin is used, and is turned round while being struck on the top. Diagram C shows the method used by skilled plumbers, the tool being known as a bent bolt. When tin-washed pipe is used, special care is necessary in the use of these tools, as well as on lighter pipe work, if the formation of collecting points for grease is to be avoided.

Diagram D is interesting. After examining the opened-up joints referred to in last week's article, the writer talked the matter over with a master plumber having a high reputation for good work. He found fault with the methods employed in teaching, stating that apprentices were often first allowed to wipe joints on pieces of pipe not cut through, and that more consideration was given to the external appearance of the joint than to its proper preparation. He allowed one of his own joints to be cut open to show how, in his opinion, they should be made. The diagram is not quite to scale, but is intended to represent a 1½-in. branch jointed to 2-in. main in very heavy piping. This is a good joint, but it can be faulted. It will be noticed that there is a slight ledge at the heel of the branch. This would be of little importance on a service pipe, but on a waste pipe a point of attachment is afforded for the collection of grease. It may be thought that too much importance is being attached to this matter, but it is thought that on the one-pipe system it is vital. Grease will attach itself to the inside of a smoothly enamelled bath and has to be removed. It will cling to white-glazed channel bottoms in inspection chambers, and, as has been shown in *The Builder* Inquiry column, it sometimes accumulates in drains in such quantities that advice is sought on methods to be adopted for its removal. Where traps are dependent on a clear airway through anti-syphonage pipes for the preservation of their seals, the importance of leaving no point of attachment for grease cannot be overestimated. In the writer's view, traps requiring the attachment of an anti-syphonage pipe for the preservation of their seals should, when used on a one-pipe system, be provided with an arm during manufacture. This is done in the case of water-closet traps, and there is no insuperable difficulty about the application of the same principle to metal traps.

There are many other sorts of joints used by plumbers on lead piping, but space will not allow of their illustration and description. Readers assuming responsibility for one-pipe installation work should study this part of the subject carefully. Some of the earlier text-books, that date back to the time when the plumber worked mainly in lead, deal with this matter at great length, and contain much that is of value.

### Cement Joints on Iron Pipe.

On several recent occasions experienced master plumbers, lecturing or reading papers on the one-pipe system, have drawn attention to the danger of leakage at soil pipe joints, due to differences in the behaviour of lead and iron in regard to expansion and contraction. As they put it, the lead used in caulked joints is liable to "creep." To some extent this is borne out by the writer's experience, for when testing soil pipes subjected to the direct rays of the sun, he has found leakages. It has been suggested that joints made of Portland cement and sand should be preferred, as the expansion and contraction of this material may, from a practical standpoint, be regarded as equal to that of iron. When an iron soil pipe is joined to a stoneware drain, the by-laws commonly call for a Portland cement joint. This material is expected to adhere to both the iron and the stoneware surfaces. From that it is a logical step to say that it may be expected to adhere to two iron surfaces. When pipes are always full of cold water, as is the case with water mains, any expansion and contraction will be very small, and here caulked lead has the advantage of being impervious under severe pressure, and of resisting the contamination of water by refusing entry from without. Similarly, when iron drains are laid in the ground, they will not usually be subjected to much fluctuation in temperature, and therefore the caulked lead joints will remain sound. The writer has not, however, sufficient experience of cement as a material for jointing soil pipes to warrant the expression of a decided opinion; but the matter is certainly of interest.




But with experience of "rust cement" as formerly widely used in low-pressure hot-water heating work, the writer can give a reasoned opinion as to the value of this material for jointing iron pipes. In schools built 40 to 50 years ago, the rust joints formed on large-diameter cast-iron piping still remain perfectly sound. Such piping is subjected to considerable expansion and contraction by reason of the wide range in temperature between water that is heated at intervals. The preference now shown for other forms of jointing in this work is mainly due to the greater speed and convenience with which the work can be carried out, and not to any want of soundness in properly made rust joints. There is, however, one drawback to the use of this material; it makes it very difficult to take the work apart, should it be necessary to do so. It can be done; but there is not only some risk of breakage, but a likelihood of disturbing other joints when one is disturbed. On soil pipes this would not often be necessary, and usually any additional fitment could be connected to a branch. The L.C.C. by-laws make use of the expression "or otherwise in an equally suitable and efficient manner," and this method might well be "tried out." Clarke's Tables give two receipts for the making of "Rust or Cast Iron Cement" as follows:—

Quick-setting cement—
1 part by weight sal-ammoniac,
2 parts by weight flour of sulphur,
80 parts by weight iron borings.

Slow-setting cement—
2 parts by weight sal-ammoniac,
1 part by weight flour of sulphur,
200 parts by weight iron borings.

Plumbers using this material vary the proportions, but the above is recommended by Molesworth and agreed by Clarke. The slow-setting cement makes the stronger joint, but requires more time to set. In preparing the cement the borings should be made red-hot to free them from dirt and oil, and then be broken up small by pounding. The other ingredients are added, mixed, and slightly moistened. They then begin to rust and warm up as the result of chemical action, and when this takes place they should be again well mixed and covered with water. To make a sound joint it is necessary that the iron surfaces should be clean and bare, and therefore coated soil pipes would require to have the coating removed from the end of the pipes and the insides of the sockets; objection might be raised to this, but should not be sustained. At all events, after the pouring of hot lead and caulking or the caulking of lead-wool coating inside the socket and joint will have no value. Another material that has been recommended for the making of these joints is bituminous asphalt poured hot; the writer has no experience of this as a jointing material, though it seems to stand very well when used as a grout or poured as a dampcourse.

---

### Furzfield Wood, Potters Bar.

Middlesex C.C. and Potters Bar U.D.C. are jointly to acquire about 40 acres of land, including Furzfield Wood, for preservation as an open space for the use of the public.

# GAS V. ELECTRICITY

## MUNICIPAL TRADING.

AT the annual meeting of the Brighton, Hove and Worthing Gas Company an important question was raised by the Chairman as to the facilities that should be granted to municipal tenants to elect what form of lighting and heating should be installed in the houses provided by the local authority. The Company have a private Act, obtained in 1934, which contains the following section: "The Housing Authority shall not in connection with the selling, leasing, letting or disposal of any land, make or impose any condition or restriction in respect to the form of light, heat, power or energy to be supplied to or used in any such building on any such land or in any building erected on such land." The Gas Company interpreted this section as meaning that at the time the municipal dwelling is in course of construction, equal facilities should be given to the electrical undertakers and the gas undertakers to prepare the dwelling so that the ultimate tenant should have the choice between the commodities, and on the evidence given before the Committee when the Bill was passing through Parliament, it was alleged that a combination of the two elements—that is, gas for cooking, and gas or electricity for lighting and heating—was what was most acceptable to the public.

### An Alleged Infringement.

The Brighton Corporation is, of course, the housing authority, but they are also the undertakers for the supply of electricity, and the houses erected by them are fitted as "all-electric" houses, and they had passed a resolution: "That the Gas Company be informed that the Corporation are not prepared to give a general permission to carcass houses in the course of building for gas." The Company consider this an infringement of their Act and also of the Gas Undertakings Act, 1934. Section 27 of the latter Act provides: "It shall not be lawful after the passing of this Act for a local authority to insert, or procure to be inserted, in any instrument in connection with the sale or letting of any premises which they own or in which they have any interest and which are situated within the authorised limits of supply of the undertakers not being a local authority, a provision restricting the right of any owner or occupier of the premises to take a supply of gas from those undertakers." Sub-section (2) provides: "For the purposes of this section a provision which would have the effect, in the event of an owner or occupier of premises taking a supply of gas, of imposing upon him obligations to which he would not otherwise be subject, or taking away from him rights which he would otherwise enjoy, shall be deemed to be a provision restricting his right to take that supply."

The issue between the Gas Company and the Brighton Corporation, apparently, is at what stage the provisions of either, or both, of the Acts come into operation, and on that point we express no opinion. Treating the whole question generally, it is obvious that it is desirable that the benefit of modern conveniences should be placed unrestrictedly in the hands of the public, and that no question arising out of municipal trading should intervene, and that each element should be available at the free choice of the user according to the cost and efficiency attaching to the same. Thus, gas may be considered as cheaper for cooking and heating, but electric light preferable as an illuminant. But in some cases the local authority is the gas undertaker, whilst in other cases the position is reversed and the electric supply is in the hands of the local authority. Thus it appears that the free choice between the two should be secured by a general public statute to meet both cases, and, further, that that statute should be expressed in clear terms, and should meet the difficulty experienced in the case we are discussing as to the installation of fittings when the houses are in course of erection.

# BUILDING WAGES

## "LIGHTNING" STRIKE AT PARK ROYAL.

THE special committee of the National Joint Council for the Building Industry—appointed to examine the claim by the operatives for an alteration of the cost of living sliding scale so as to raise the standard wage rates by 1d. an hour all round—reported to the National Council on March 21. An official statement issued by the Council after its deliberations was to the effect that "in the result the employers intimated that they were prepared to reconsider the claim of the operatives subject to consideration of submissions which had been made by the employers. For the purpose of considering these matters the position has been referred to a special joint committee of the employers and operatives, as provided for in the constitution of the National Joint Council, and the committee will report within one month from this date." A meeting has been fixed for the beginning of April.

### Temporary Strike at Park Royal.

A "lightning" strike at the Guinness factory scheme at Park Royal was declared on Tuesday, March 19. The strike, which was unofficial, originated in the refusal of the contractors, Messrs. Holland & Hannen and Cubitts, Ltd., to pay wages to a bricklayer for the previous Saturday morning in the absence of proof of the workman's presence on the job, he having omitted to clock in. The strike involved upwards of 1,000 men—all of whom were then paid off by the contractor.

A special commission appointed by the representative federations of employers and operatives met to consider the matter and reached the unanimous conclusion that the strike was improper as no attempt was made to employ the machinery provided for such a contingency. The matter has been reported to the executives of the federations for consideration.

The contractors reopened the job on Monday last, when 700 of the men were re-engaged.

# MIDLANDS BUILDING ACTIVITY

EVIDENCE of an increased building activity in the Midlands, and particularly Birmingham, is shown by an analysis of the building plans approved by local authorities in that area during 1934, in what are known locally as "the industrial Midlands." This indicates that the estimated cost of buildings, including houses, in respect of which plans were passed, amounted to nearly £18,000,000, an increase of 25.8 per cent. on the figures for 1933, and compared with an average increase of 14.3 per cent. for England, Wales and Scotland.

In Birmingham alone, plans for new factories and factory extensions costing over £1,600,000 were approved during 1934, and at present many of these undertakings are being carried out. At Tyseley (Birmingham) a new factory with a floor space of 100,000 sq. ft is being erected for Slumberland Mattresses, Ltd., and a two-story factory, twice the size of the large existing works, is being erected for Smith's Potato Crisps. The Birmingham Co-operative Society's laundry at Handsworth is being extended at a cost of £70,000, and the Society's dairy in Vauxhall-road, Birmingham, is also being enlarged. A new machine shop, covering 25,000 sq. ft., is being built at Witton, Birmingham, for Higgs Motors, Ltd., and the General Electric Company is extending its switchgear, moulded insulation and conduit sections. At the Austin Motor Company's works at Longbridge, Birmingham, a development scheme involving extensions to the factory is to be put in hand almost immediately, involving an expenditure of £50,000.

---

### Aluminium Data.

The British Aluminium Co., Ltd., issue from Adelaide House, E.C.4, a series of useful leaflets giving the properties of aluminium and its alloys, and sizes, weights, etc., of rods, sheet and strip in this metal.

# NEW PUBLIC WORKS

BEDFORD.—Tenders are invited for extensions to the Langford County School for the Bedfordshire E.C. Specifications are obtainable from the County Surveyor, Shire Hall, Bedford, upon deposit of £1 1s., and tenders are returnable by April 11.

BIRMINGHAM. — Birmingham Electric Supply Department invite tenders for ferro-concrete foundations for plant at Hams Hall Power Station extensions. Applications for bills of quantities to be made, with £5 5s. deposit, to City Electrical Engineer, 14, Dale-end, Birmingham, by April 2. Drawings, etc., may be inspected at office of the consulting engineers, Messrs. L. G. Mouchel and Partners, 36-38, Victoria-street, S.W.1, and 50, Cotton-lane, Moseley, Birmingham. Tenders by April 15.

BRIDLINGTON.—The Parade and Property Committee have passed a scheme for the erection of a new dance-hall and concert-hall and the lay-out of Victoria Gardens, to cost £28,000. Plans by the Borough Surveyor.

BRIGHTON.—T.C. invite tenders for the erection of a public hall at Rottingdean. Particulars from the Borough Engineer and Surveyor, Town Hall; deposit £2 2s. Tenders by April 13.

BRISTOL.—Tenders invited by T.C. for alterations and additions to the Bedminster Bridge, St. George's-road (Brandon Hill) and two Mile Hill Junior Instruction Centres. Particulars from Mr. M. O. McAuliffe, Chief Education Officer, Guildhall, before April 3. Dep., £3 3s. Tenders by April 17.

BROMLEY.—T.C. invite tenders for the erection of 20 houses in George-lane, Hayes, to plans prepared by Mr. J. M. Calvin, L.R.I.B.A., 3, High-street. Particulars from Mr. S. Critchley Auty, Town Clerk, Municipal Offices. Deposit, £2 2s. Tenders by April 13.

CHESTER.—E.C. invite tenders by April 13 for erection of Blacon primary school. Specifications, etc., from Mr. F. Anstead Browne, F.R.I.B.A., County Architect, The Castle, Chester, on deposit of £2 2s.

COVENTRY.—Tenders invited for the erection of public baths in Livingstone-road, Foleshill, for T.C. Plans by Messrs. Adshead, Topham and Adshead, 14, Ridgefield, Manchester. Those desiring to tender, to send their names to Mr. Frederick Smith, Town Clerk, Council House, by April 5, with deposit £3 3s. Tenders by May 1.

GREAT BRITAIN. — The Incorporated Church Building Society have made grants towards building new churches at: Barrow-in-Furness, St. John, £200; Becontree, St. George, £250; and towards enlarging or repairing the churches at: Earls Barton, All Saints, £40; Facit, St. John, £20; Hatfield Heath, Holy Trinity, £15; Henham, St. Mary, £25; Hougham, All Saints, £10; Marston, St. Mary, £15; Old Cleeve, St. Andrew, £20; Plymouth, St. Simon, £75; Seasalter, St. Alphege, £75; Tankersley, St. Peter, £50; Tunstead, St. Mary, £30; Wootton, St. Martin, £15.

GUILDFORD.—A provisional contract for the conversion of the Stoughton School buildings to new school for 350 junior mixed and 350 infants, for the E.C., has been placed with Mr. R. O. Garrard, West Byfleet, at £12,366.

HORNCHURCH.—U.D.C. invited tenders for the erection of a block of offices, at "Langton," Billet-lane. Particulars from Mr. F. Alderson, surveyor, Council Offices. Dep., £5 5s. Tenders by April 10.

MANCHESTER.—A contract for the superstructure of the Manchester Town Hall extension has been placed with Messrs. J. Gerrard & Sons, Ltd., of Swinton, Manchester. The cost is estimated at half a million pounds. Plans are by Mr. E. Vincent Harris, 39, St. James's-square, S.W.1.

NORWICH.—Tenders are invited for the erection of 44 flats, 77 three-bedroom and 12 four-bedroom houses at Mousehold-avenue Estate. Particulars from Architectural Department, City Engineer's Office; deposit £2 returnable. Tenders to be delivered to the City Engineer before April 14.

# NEW BUILDINGS IN LONDON

BARKINGSIDE. — SHOPS. — Messrs. Marshall and Tweedy, FF.R.I.B.A., 4, Cavendish-place, W.1, are the architects for seven shops with flats over in the High-street. No building contract has yet been placed.

BECONTREE.—HOUSING.—A tender for the erection of 36 large-type houses at Barking, No. 17 section, has been accepted at £19,459 from Messrs. R. J. Rowley, Ltd., Belmont-avenue, W.17. Plans are by the Architect's Department, County Hall, S.E.1.

BECONTREE.—HOUSING. — L.C.C. propose the erection of 159 houses and flats on various sites at Wood-lane and Parsloes-avenue, etc., and have accepted the tender of Messrs. Henry Boot and Sons, Ltd., 10, The Boltons, S.W.10, at £53,505. Plans are by the Architects's Department, County Hall, S.E.1.

BEDDINGTON.—SHOPS.—A plan showing the proposed erection of 36 houses and bungalows at a new road between Bridges-lane and Hilliers-lane, and a site for 40 shops abutting on Croydon-road between the extremities of the proposed new road, on an estate to be known as the Ellerton Park Estate, has been prepared for the New Ideal Homesteads, Ltd., Erith.

BERMONDSEY.—CLINIC.—Bermondsey B.C. propose the erection of a clinic for tuberculosis, a solarium and a foot clinic at Grange-road. Part of the building will be used as a maternity and child welfare centre. The cost is £44,925. The L.C.C. has sanctioned that part of the scheme over which it has jurisdiction. The scheme will be carried out by direct labour under the Borough Surveyor.

BERMONDSEY.—HOUSING.—The B.C. are to seek the sanction of the Ministry of Health to borrow £3,218 for purchase of .29 acres at Rotherhithe -street for the erection of 17 flats; they are also to erect 151 flats at Alice-street clearance area at a cost of £80,216, in addition to £22,500 for land. Work on these schemes will be by direct labour, under the general manager.

BERMONDSEY.—HOUSING.—The L.C.C. has agreed to the following schemes for housing proposed by the B.C. : Cherry Garden-place area, Block 1, £18,926; Cherry Garden-place, block 4, £8,550; Cherry Garden-place, block 5, £8,660. Work will be carried out by direct labour.

BLOOMSBURY.—UNIVERSITY BUILDINGS.—Plans have been approved by Holborn B.C. for the second portion of the University of London, which comprises the University Library and Institute of Education. Plans are by Mr. Charles Holden, F.R.I.B.A., 9, Knightsbridge, S.W.1. No contract has yet been placed.

CHINGFORD. — HOUSING. — L.C.C. have acquired a site of 217 acres at Chingford, Essex, for the erection of dwellings for the relief of overcrowding. The site has a long frontage to Whitehall-road on the north. Plans will be prepared in the Architect's Department, County Hall, S.E.1, but only the site lay-out is at present ready.

COMMERCIAL-ROAD EAST.—BUILDINGS.—Plans for shops and warehouse at Nos. 153-157, and 2-8, New-road, and 2, Nelson-street, have been prepared by Mr. James Cannell, F.R.I.B.A., 52, Holborn Viaduct, E.C. No building contract yet placed.

COULSDON. — HALL. — Messrs. Sinders, Tomkins and King, 26, Chipstead Valley-road, Coulsdon, have prepared plans for a boys' club and public hall in Chipstead Valley-road. A contract will be placed in about three weeks' time.

COULSDON.—HOUSES.—Mr. F. J. Watson, A.R.I.B.A., 31, Fawley-road, Selsdon, Surrey, has prepared plans for houses at Tollers-lane. Plans have been approved by the Coulsdon and Purley U.D.C.

CROYDON. — FLATS. — Armstrong Estates, Ltd., Winterhill Estate Office, Guildford, propose the erection of two blocks of flats and garages at London-road, Croydon, between Grove-road and Sycamore-way.

EALING.—CHURCH HALL.—Mr. J. P. Blake, Bank House, High-street, Hounslow, has prepared plans for a church hall in Federal-road, for London Diocesan Fund. Messrs. Melson and Rosier, 73, Canning-road, Wealdstone, N., are the contractors.

EALING. — FACTORY. — Messrs. Wallis, Gilbert and Partners, 15, Elizabeth-street, S.W.1, have prepared plans for the erection of a factory with offices at Greenford-road for Joseph Nathan and Co., Ltd.

EALING.—FLATS AND GARAGES.—Mr. F. Lincoln Berry, 74A, Holland-road, Harlesden, N.W.10, has prepared plans for 66 flats and 58 garages at Stanley-avenue, and 12 flats at Lincoln-close, for Messrs. Jermey and Son, Ltd., 185, Dudden Hill-lane, N.W.10, who will carry out the building work.

EALING.—FLATS AND GARAGES.—Warwick Estates, Ltd., propose the erection of 55 shops with maisonettes over and 34 garages at Whitton-avenue and The Fairway. Plans are by Messrs. Marshall and Tweedy, FF.R.I.B.A., 4, Cavendish-place, W.1.

EALING.—FLATS.—Mr. Guy H. Nicholls, A.I.A.A., 2, The Broadway, Stanmore, has prepared plans for the erection of five blocks (111 in all) of flats at Greenford-road. A contract will be placed within a few weeks.

EALING.—FLATS.—Lucas Estates (1933), Ltd., propose the erection of a block of four flats at Clifton-road and six blocks of four flats each, with five garages, at Costons-lane. Plans have been prepared by Messrs. Marshall and Tweedy, FF.R.I.B.A., 4, Cavendish-place, W.1.

EALING.—FLATS.—Messrs. Geo. Young (Floriston), Ltd., Ashbourne-avenue, Harrow-on-the-Hill, propose the erection of 10 blocks of flats, 80 in all, at Whitton-avenue, to their own plans.

EALING. — FACTORY. — Messrs. Wallis, Partners, Haven House, Ealing, W.5, have prepared plans for 41 flats at Mount-avenue, for Mrs. Kanal.

EALING.—FLATS.—Messrs. W. H. Read and Co., Ltd., 41-42, Haven-green, W.5, are the surveyors in connection with a scheme to erect 24 flats in three blocks at "White Lodge," Castlebar Park.

EALING. — HOUSES. — Hillside Estates (Southport), Ltd., Western-avenue, Greenford, propose the erection of 64 houses at Woodhouse-avenue, Rhyl-road and Scorton-avenue. Plans have been prepared by Messrs. R. Lancaster and Sons, 30, Ealing-road, Wembley, who will carry out the building work.

EALING. — HOUSES. — Messrs. Dodge and Reid, 72, High-street, Brentford, have prepared plans for 104 houses at Horsenden-lane, Sunley-gardens, Selbourne-gardens, and Salvia-gardens, for the Parkwood Building Co., Ltd., who will carry out the work.

EALING.—HOUSES.—Messrs. Ruddock and Meighan, Burford House, Harrow View, Wealdstone, propose the erection of 95 houses at Ferrymead-avenue, Ferrymead-drive, Greenway-gardens, Crossmead-avenue, and Rosedene-avenue.

EALING.—HOUSES.—Messrs. Swannell and Sly, High-street, Rickmansworth, have prepared plans for 22 houses at Wood End-lane, for Hillingdon Estate Co.

EALING.—SHOPS, FLATS AND DAIRY.—Mortimores Dairies (Ruislip), Ltd., propose the erection of three shops with flats over and a dairy at Oldfield-lane and Greenford-road. Mr. H. Leach, 49, Sinclair-road, West Kensington, W.14, is the consulting engineer.

EALING. — WORKS. — Messrs Bayes and Bishop, 6, Pownall-gardens, Hounslow, have prepared plans for a joinery works at St. Margaret's-road, for Arthur Foulds, Ltd. No contract placed.

EALING BROADWAY.—ALTERATIONS.—Messrs. Hall-Jones and Partners, Haven House, W.5, have prepared plans for the erection of additions for London Drapery Stores, 121-123, Broadway, W.13. Mr. F. Hutchings, 129, The Broadway, West Ealing, has obtained the contract.

EAST HAM. — ADDITIONS. — Messrs. H. Seymour Couchman and Sons, 520, High-road, N.17, have prepared plans for a block of three-storied warehouses and offices at the rear of 90-96, High-street North. A contract has been placed with Mr. F. E. Little, 479d, High-road, Tottenham, N.17.

EDMONTON. — HOSPITAL MODERNISATION. —The Middlesex C.C. are considering the modernisation of North Middlesex County Hospital. Adaptation of certain surrounding buildings and the erection of new is proposed. The proposals are estimated roughly at £500,000. Mr. W. T. Curtis, F.R.I.B.A., 10, Great George-street, S.W., is the County Architect. The scheme is at a preliminary stage.

ELTHAM. — CHURCH. — The Southwark Diocesan Authorities propose to build a church and church hall at Bexley-road.

ELTHAM. — SHOPS AND FLATS. — Messrs. Feakes and Richards, Ltd., 136, Woolwich-road, Abbey Wood, are builders for a scheme of 9 shops with dwelling accommodation above, at Well Hall-road and Westmount-road, Eltham. Plans are by the builders' own staff, and building will shortly commence.

EAST DULWICH.—HOUSING.—The L.C.C. have approved a lay-out for four blocks, comprising 156 dwellings, on the East Dulwich estate. The estimate is £81,200. Plans will be prepared by the Council's Architect, County Hall, S.E.1.

EAST HAM.—HOUSES.—East Ham B.C. propose the erection of dwellings at Claremont-street and Francis-street, North Woolwich. The Ministry of Health is to be asked to sanction the £7,592 estimate of cost.

GREAT PORTLAND-STREET. — SHOWROOMS AND OFFICES.—A block of showrooms and offices at 97-99, Great Portland-street, 3, Gildea-street, and 6, Hallam-street, is to be erected for Mr. C. E. Peczenik, 17, New Cavendish-street, W.1. Plans are being prepared by Mr. T. H. F. Burditt, 42a, Chepstow Villas, W.11.

HAMMERSMITH.—HOSPITAL EXTENSIONS. —The British Postgraduate Medical School is to erect at Hammersmith Hospital a one-story block of rooms and laboratories, and also two hard tennis courts. Plans will be prepared, by arrangement, by the Architect to the London County Council, County Hall, S.E.1, who will also make contract arrangements.

HAMPTON.—SCHOOL.—Middlesex C.C. is considering a proposal to remove the Lady Eleanor Holles School from Hackney to Hampton, where new buildings would be erected on the Rectory Farm Estate. The scheme is as yet at an early stage, but plans would be prepared by the County Architect's Department, 10, Great George-street, S.W.1.

HENDON.—CHAPEL.—A contract at £2,712 for a chapel and other buildings at the Paddington B.C.'s cemetery at Hendon has been placed with Messrs. Payne Bros., Leavesden, Watford. Plans are by the Borough Surveyor, in conjunction with Mr. E. E. Lofting.

HYDE PARK-TERRACE. — BUILDINGS. — Mr. Septimus Warwick, F.R.I.B.A., 2-4, Cockspur-street, W.C.1, has prepared plans for buildings at 3-8, Hyde Park-terrace, and 10-14, Albion Mews East. The scheme is for Mr. Harry Neal, 117, Baker-street, W.1, who will carry out the building work.

ILFORD. — ALTERATIONS. — The Borough Engineer and the Borough Electrical Engineer are to prepare plans for alterations and improvements to the showrooms in Ilford Hill.

ILFORD.—BUILDING.—The T.C. has approved the erection of a mortuary and garages at the isolation hospital, from plans prepared by the Borough Engineer, Mr. L. E. J. Reynolds. The estimated cost is £4,096.

ILFORD.—HALL.—A new church hall is to be erected on a site adjoining St. Paul's Church, Barley-lane, from plans prepared by Messrs. Milner and Craze, LL.R.I.B.A., 5, Racquet-court, E.C.4.

ILFORD.—HALL.—Mr. T. H. B. Scott, F.R.I.B.A., 11, Finsbury-square, E.C.2, is the architect for a new church hall and

chapel in Third-avenue. Messrs. H. C. Horswill, Ltd., 182, Green-street, Forest Gate, E.7, are the builders.

ILFORD. — HOUSES. — Plans have been passed by the T.C. for roads, sewers and 350 houses in Rushden-gardens, Tiverton-avenue, Dymchurch-close, Lessingham-avenue, Cottesmore-avenue, Caterham-avenue, Heathcote-avenue and Cheriton-avenue, for the New Ideal Homesteads, Ltd., Ideal House, Carlton-road, Erith.

ILFORD.—LIBRARY.—The T.C. are considering the erection of a branch library, estimated to cost £12,000, on a site at Gantshill.

ILFORD. — REBUILDING. — Messrs. James Broderick and Co., 128-130, High-road, are to have their premises rebuilt. The architect is Mr. Granville F. Siegerts, L.R.I.B.A., New North-road, Hainault, Ilford. The builders are Messrs. Clements Bros., Ltd., of East Ham.

ISLINGTON.—DWELLINGS.—The tender of £14,394, submitted by Messrs. Rowley Bros., Tower Works, Dunloe-avenue, N.17, for the erection of 36 dwellings at Ring Cross estate (Hope-street area) has been accepted by the L.C.C. Plans are by the Architect, County Hall, S.E.1.

KENLEY.—LIBRARY.—Coulsdon and Purley U.D.C. are to purchase land at the Whyteleafe Estate for the erection of a sub-library.

LEWISHAM.—BATHS AND LIBRARY.—Mr. Oswald Parratt, F.S.I., Adelaide House, King William-street, E.C.4, has been instructed by the B.C. to prepare quantities for the scheme of swimming baths and library at Durham Hill, which are estimated to cost £50,000. Tenders for the filtration plant are to be obtained at once.

LEWISHAM.—CLINIC.—The B.C. propose to erect a central maternity and child welfare clinic and a tuberculosis dispensary at the Priory site, High-street, Lewisham. Tenders, returnable by April 29, are now invited, upon deposit of £2 2s.

LEWISHAM.—HOUSES.—Messrs. J. and C. Bowyer, Ltd., Haynes-Lane, S.E.19, propose the erection of houses at Ravensbourne Park and Westdown-road.

MAIDA VALE. — SHOPS AND FLATS.—Messrs. Marshall & Tweedy, FF.R.I.B.A., 4, Cavendish-place, W.1, are to submit revised plans to the L.C.C. for shops and flats at the corner of Maida Vale and Elgin-avenue, W.9.

MIDDLESEX.—WORKS.—Middlesex C.C. is to make application to the Ministry of Health for borrowing the following amounts : Enlargement of the Cranborne Council School, Potters Bar, including wages of clerk of works (£240), £7,844; purchase of about 4.625 acres of land on the Lyon Park Farm Estate, Kenton, for the provision of an additional elementary school, £5,780; purchase of about 4 acres of land on the Ruislip Gardens Estate, Ruislip, for the erection thereon of an elementary school, £2,285; construction of a bridge to carry Roxborough-road, Harrow, over the Metropolitan and London and North-Eastern Railways, £5,725; erection of a new court house at Tottenham, including wages of clerk of works (£350), £22,428. Mr. W. T. Curtis, F.R.I.B.A., 12, Great George-street, S.W.1, is County Architect.

NORTHOLT.—SHOPS.—Mr. A. P. Starkey, Station-road, Harrow-on-the-Hill, has prepared a lay-out plan for nine shops at Church-rd., Northolt.

PADDINGTON. — FLATS. — Messrs Wimperis, Simpson and Guthrie, FF.R.I.B.A., 61, South Molton-street, W.1, are architects for a ten-story block of flats at 13-15, St. Petersburgh-place, Paddington. The scheme is at an early stage.

POTTERS BAR.—SCHOOL.—The Cranborne Council School, Potters Bar, is to be enlarged, and a contract at £7,603 has been placed with Messrs. Leightons (Contractors), Ltd., 62, Oxford-street, W. Plans have been prepared by the County Architect's Department, 10, Great George-street, S.W.1.

PURLEY. — CHURCH. — Messrs. Smee & Houchin, 22, Essex-street, W.C.2, are preparing plans for the erection of a Methodist Church at Godstone-road and Sylverdale-road, Purley.

ROTHERHITHE.—BUILDINGS. — Bermondsey B.C. have approved plans, submitted on behalf of Messrs. A. J. Gardiner and Son, wharfingers, 107, Rotherhithe-street, providing for the rebuilding of 128, Rothehithe-street and its connection, by a bridge, with a building on the quay. No building contract yet placed.

ST. PANCRAS. — HOUSING. — St. Pancras B.C. is to acquire a site in Highgate-road, at £3,050, for housing purposes. Plans will be prepared by the Council's architect.

STAINES. —CHURCH HALL. — Mr. J. P. Blake, Bank House, High-street, Hounslow, has prepared plans for a church hall at Laleham, near Staines, for the London Diocesan Fund. A contract has been placed with Messrs. C. Sayers and Sons, London-road, Mitcham.

SANDERSTEAD.—FARM BUILDINGS.—The Express Dairy Co., Ltd., Tavistock-place, W.C.1, propose to make alterations and steel-framed additions to their buildings at Borough Farm, Limpsfield-road, Sanderstead.

SIDCUP.—SORTING OFFICE. — The Post Office is to have a new sorting office, which will be erected by Mr. L. T. Buckley, Dorland House, 14, Lower Regent-street, S.W.1. Plans are by the Architects' Department, H.M.O.W.

STEPNEY.—CONVERSION.—The B.C. propose to acquire the "Strangers' Home," West India Dock-road, and convert it into 23 dwellings for temporary rehousing purposes. Plans for the work, which will cost £1,800, will be prepared by the Borough Engineer, Raine-street, Stepney, E.1.

STEPNEY —OFFICE BUILDING.—Custom and Excise Department are to have new offices at the South Quay, West India Docks, for which plans have been prepared by H.M. Office of Works. A building contract has been placed with Messrs. W. Harbrow, Ltd., 214, Rotherhithe New-road, S.E.16.

STEPNEY.—SUB-STATION.—The B.C. are to erect an electricity sub-station in reinforced concrete at Sutton-road East, Shadwell, E.1, to plans by the Borough Engineer, Mr. Bernard J. Belsher, F.R.I.B.A., Raine-street, E.1, from whom specifications are obtainable on deposit of £5. Tenders are now invited, returnable by April 24.

WALTHAMSTOW.—FACTORIES. — Messrs. E. Fuller and Son, builders, 68, Beulah-road, E.17, have had plans passed for the erection of two factories at Blackhorse-road, Plans were prepared by Messrs. Fuller, and work will start immediately.

WALTHAMSTOW. — MUNICIPAL BUILDINGS.—Mr. P. D. Hepworth, F.R.I.B.A., 7, Gray's Inn-place, W.C.1, has submitted revised estimates, totalling £220,350, for the proposed town hall. Mr. Sidney A. Paine, New Court, Carey-street, W.C.2, has been appointed quantity surveyor.

BRITISH MADE
Henderson
Guaranteed
We invite you
SLIDING DOOR GEAR
to send for our technical representative and illustrated treatise — free.
Easily the best and competitive in price.
P. C. HENDERSON LTD., BARKING, ESSEX


WIMBLEDON PARK.—FLATS.—Messrs. Roy Gibson, Ltd., builders, Templeton estate, Priory-lane, S.W.15, have received the sanction of the L.C.C. Town Planning Committee to erect a block of flats on the site of "Albemarle," Wimbledon Park South, Wandsworth. Plans have been prepared by the builders' architectural department.

## NEW CINEMAS

BRIDGWATER.—Mr. T. Cecil Howitt, F.R.I.B.A., Exchange Buildings East, Nottingham, has prepared plans for the erection of a cinema on the Cattle Market site, at Penel Orlieu, for the Odeon Circuit, Birmingham.

CHESTER.—Messrs. William and Segar Owen, F.R.I.B.A., Palmyra Square-chambers, Warrington, are architects for a cinema at Swan-court, Foregate-street, for Messrs. Birrell and Fennell, "Waverley," Sandiway, near Northwich.

COLWYN BAY.—The Odeon Circuit, Cornhill House, Bennetts-hill, Birmingham, have had plans passed by the local council for a 1,700-seater cinema, to cost £50,000. It is proposed that a large stage, with dressing-rooms, shall be provided. Plans are by Mr. Harry W. Weedon, A.R.I.B.A., 84, Colmore-row, Birmingham.

CONWAY.—The contract for the building of the new cinema in High-street, Conway, has been let to Messrs. Ashworth Bros., Colwyn Bay. The building, which is for Mr. H. C. Jones, has been planned by Mr. S. Colwyn Foulkes, A.R.I.B.A., Central-chambers, Colwyn Bay.

DUNSTABLE.—The Southan Morris Circuit, Ltd., are to extend considerably the "Palace" to form a cinema to seat over 1,000 persons. Plans have been prepared by Messrs. Leslie Kemp and Tasker, A.R.I.B.A., 10, Great James-street, Bedford-row, W.C.1.

GLOUCESTER.—Messrs. C. W. Poole's Entertainments, 31, Eastgate, Gloucester, are to modernise the "Hippodrome," including replacement of circle by a larger one, new entrance and foyer, new lighting, heating and ventilating installations, etc.

HATFIELD.—A contract for the erection of the cinema to seat 1,500 persons at Hatfield has been placed with Messrs. W. F. Blay, Ltd., 1A, Dowgate-hill, E.C.4, and Dartford, Kent. The building, which is for Mr. D. J. James, Cinema House, Oxford-street, W., has been planned by Messrs. Leslie Kemp and Tasker, 10, Great James-street, Bedford-row, W.C.1.

LUTON.—Messrs. Leslie Kemp and Tasker, A.R.I.B.A., 10, Great James-street, Bedford-row, W.C.1, are to prepare plans for the erection of the "Ritz" Cinema, at Luton, for the Southan Morris Circuit, Ltd.

MANCHESTER. — Messrs. Drury and Gomersall, Imperial Buildings, Oxford-road, Manchester, are preparing plans for a cinema on Stockport-road, Longsight, for Mr. J. Buckley, the Pyramid Theatre, Washway-road, Sale. Scheme in early stage.

NEATH.—Messrs. Mercer and Vaughan, 20, Wind-street, Swansea, are architects for the rebuilding of the Hippodrome as a cinema to seat 1,750 persons. The cost is put at £30,000. The work is for the South Wales Cinemas, Ltd.

PITLOCHRY.—A private company has been formed at Pitlochry, Perthshire, to erect a cinema in the town, and an option has been acquired on a site at Moulin-road. Plans will be prepared by Mr. J. H. Brander, architect, Pitlochry, for a building to seat 480 people. The estimated cost is £5,000.

RUTHERGLEN.—Plans are being prepared and submitted for a new picture house, the "Rio," to be built at the corner of King-street and Glasgow-road, Rutherglen, Glasgow, by Suburban Pictures, Ltd., owners of the Rio, Canniesburn. The new cinema will accommodate 2,000. Building operations will be commenced shortly. Other cinemas for the company were designed and built by Messrs. Cowiesons, Ltd., 3, Charles-street, Rollox, Glasgow.

# RATES OF WAGES IN THE BUILDING TRADE

**AS AND FROM 1st FEBRUARY, 1935.**

**[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]**

| | Crafts-men. | Lab-ourers. |
|---|---|---|
| Aberdare | 1/5 | 1/0¾ |
| Abergavenny | 1/5 | 1/0¾ |
| Abingdon | 1/4 | 1/0 |
| Accrington | 1/5½ | 1/1¼ |
| Aldeburgh | 1/1½ | 10¼ |
| Aldershot | 1/2½ | 11 |
| Alfreton | 1/5½ | 1/1¼ |
| Alnwick | 1/4½ | 1/0½ |
| Altrincham | 1/5½ | 1/1¼ |
| Amble | 1/4½ | 1/0½ |
| Amersham | 1/3½ | 11¾ |
| Ammanford | 1/5½ | 1/1¼ |
| Andover | 1/2½ | 11 |
| Arundel | 1/3 | 11¼ |
| Ascot | 1/3½ | 11¾ |
| Ashby-de-la-Zouch | 1/4 | 1/- |
| Ashford (Kent) | 1/2½ | 11 |
| Ashford (Middx.) | 1/4½ | 1/0½ |
| Ashington | 1/4½ | 1/0½ |
| Ashtead | 1/4 | 1/- |
| Ashton-under-Lyne | 1/5½ | 1/1¼ |
| Aylesbury | 1/3 | 11¼ |
| Aylsham | 1/2½ | 11 |
| Bagshot | 1/2½ | 11 |
| Banbury | 1/3 | 11¼ |
| Barnsley | 1/5½ | 1/1¼ |
| Barnstaple | 1/3½ | 11¾ |
| Barrow-in-Furness | 1/5½ | 1/1¼ |
| Barry | 1/5½ | 1/1¼ |
| Basingstoke | 1/3 | 11¼ |
| Bath | 1/4½ | 1/0½ |
| Batley | 1/5½ | 1/1¼ |
| Beaconsfield | 1/3½ | 11¾ |
| Beccles | 1/2 | 10½ |
| Bedford | 1/4½ | 1/0½ |
| Berkhamsted | 1/3 | 11¼ |
| Berwick | 1/4½ | 1/0½ |
| Beverley | 1/5½ | 1/1¼ |
| Bexhill-on-Sea | 1/3½ | 11¾ |
| Bideford | 1/3½ | 11¾ |
| Biggleswade | 1/3 | 11¼ |
| Billericay | 1/3 | 11¼ |
| Birchington | 1/3 | 11¼ |
| Birkenhead | 1/7‡ | 1/2½ |
| Birmingham | 1/5½ | 1/1¼ |
| Bishop Auckland | 1/5 | 1/0¾ |
| Bishops Stortford | 1/4 | 1/0 |
| Blackburn | 1/5½ | 1/1¼ |
| Blackpool | 1/5½ | 1/1¼ |
| Blyth | 1/5½ | 1/1¼ |
| Bognor Regis | 1/3 | 11¼ |
| Bolton | 1/5½ | 1/1¼ |
| Bournemouth | 1/4½ | 1/0½ |
| Bracknell | 1/3 | 11¼ |
| Bradford | 1/5½ | 1/1¼ |
| Bradford-on-Avon | 1/2½* | 11 |
| Braintree | 1/3½ | 11¾ |
| Brentwood | 1/5 | 1/0¾ |
| Bridgwater | 1/3½ | 11¼ |
| Bridlington | 1/5 | 1/0¾ |
| Brighouse | 1/5½ | 1/1¼ |
| Brighton | 1/4½ | 1/0½ |
| Bristol | 1/5½ | 1/1¼ |
| Broadstairs | 1/3 | 11¼ |
| Bromsgrove | 1/4½ | 1/0½ |
| Bromyard | 1/2 | 10½ |
| Buckley | 1/5½ | 1/1¼ |
| Bungay | 1/1½ | 10¼ |
| Burnham-on-Crouch | 1/2 | 10½ |
| Burnley | 1/5½ | 1/1¼ |
| Burslem | 1/5½ | 1/1¼ |
| Burton-on-Trent | 1/5½ | 1/1¼ |
| Bury | 1/5½ | 1/1¼ |
| Bury St. Edmunds | 1/3 | 11¼ |
| Buxton | 1/5 | 1/0¾ |
| Byfleet | 1/3½ | 11¾ |
| Cambridge | 1/5 | 1/0¾ |
| Canterbury | 1/3 | 11¼ |
| Cardiff | 1/5½ | 1/1¼ |
| Carlisle | 1/5½ | 1/1¼ |
| Carnforth | 1/5½ | 1/1¼ |
| Castleford | 1/5½ | 1/1¼ |
| Caterham | 1/4 | 1/- |
| Chard | 1/2½* | 11 |
| Chatham | 1/4 | 1/- |
| Chelmsford | 1/4 | 1/- |
| Cheltenham | 1/4 | 1/- |
| Chepstow | 1/4½ | 1/0½ |
| Chertsey | 1/4 | 1/- |
| Chester | 1/5½ | 1/1¼ |
| Chesterfield | 1/5½ | 1/1¼ |
| Chichester | 1/3 | 11¼ |
| Chorley | 1/5½ | 1/1¼ |
| Cirencester | 1/3* | 11¼ |
| Clacton | 1/3½ | 11¾ |
| Cleveleys | 1/5½ | 1/1¼ |
| Clitheroe | 1/5½ | 1/1¼ |
| Cobham | 1/4 | 1/- |
| Colchester | 1/4½ | 1/0½ |
| Colwyn Bay | 1/4½ | 1/0½ |
| Congleton | 1/5 | 1/0¾ |
| Coventry | 1/5½ | 1/1¼ |
| Cranbrook | 1/2 | 10½ |
| Cranleigh | 1/2½ | 11 |
| Crawley | 1/3 | 11¼ |
| Crewe | 1/4½ | 1/0½ |
| Cromer | 1/2½ | 11 |
| Crowborough | 1/3 | 11¼ |
| Cuckfield | 1/3 | 11¼ |
| Darlington | 1/5½ | 1/1¼ |
| Darwen | 1/5½ | 1/1¼ |
| Daventry | 1/4 | 1/- |
| Deal | 1/3 | 11¼ |
| Denbigh | 1/4 | 1/- |
| Derby | 1/5½ | 1/1¼ |
| Devizes | 1/2* | 10½ |
| Dewsbury | 1/5½ | 1/1¼ |
| Didcot | 1/3½ | 11¾ |
| Diss | 1/2 | 10½ |
| Doncaster | 1/5½ | 1/1¼ |
| Dorchester | 1/3* | 11¼ |
| Dorking | 1/3½ | 11¾ |
| Dover | 1/3 | 11¼ |
| Dovercourt | 1/3½ | 11¾ |
| Driffield | 1/4 | 1/- |
| Droitwich | 1/4½ | 1/0½ |
| Dudley | 1/5½ | 1/1¼ |
| Dunstable | 1/3½ | 11¾ |
| Durham City | 1/5½ | 1/1¼ |
| Eastbourne | 1/4½ | 1/0½ |
| E.Glam.(Mon.Val.) | 1/5 | 1/0¾ |
| East Grinstead | 1/3½ | 11¾ |
| Edenbridge | 1/3 | 11¼ |
| Ely | 1/2 | 10½ |
| Epping | 1/4½ | 1/0½ |
| Exeter | 1/4½† | 1/0½ |
| Exmouth | 1/3½ | 11¾ |
| Fakenham | 1/2 | 10½ |
| Falmouth | 1/4 | 1/- |
| Fareham | 1/3 | 11¼ |
| Faversham | 1/2½ | 11 |
| Felixstowe | 1/4 | 1/- |
| Filey | 1/4 | 1/- |
| Fleetwood | 1/5½ | 1/1¼ |
| Flint | 1/5 | 1/0¾ |
| Folkestone | 1/3 | 11¼ |
| Frinton-on-Sea | 1/3½ | 11¾ |
| Frome | 1/2½* | 11 |
| Gainsborough | 1/4½ | 1/0½ |
| Gateshead | 1/5½ | 1/1¼ |
| Gillingham | 1/4 | 1/0 |
| Glossop | 1/5 | 1/1¼ |
| Gloucester | 1/4½† | 1/0½ |
| Godalming | 1/3½ | 11¾ |
| Goole | 1/4½ | 1/0½ |
| Gosport | 1/4½ | 1/0½ |
| Grantham | 1/4 | 1/- |
| Gravesend | 1/5 | 1/0¾ |
| Gt. Yarmouth | 1/3½ | 11¾ |
| Grimsby | 1/5½ | 1/1¼ |
| Guildford | 1/3½ | 11¾ |
| Guilsborough | 1/4 | 1/- |
| Halifax | 1/5½ | 1/1¼ |
| Hanley | 1/5½ | 1/1¼ |
| Harpenden | 1/4 | 1/- |
| Harrogate | 1/5½ | 1/1¼ |
| Hartlepools | 1/5½ | 1/1¼ |
| Harwich | 1/3½ | 11¾ |
| Haslemere | 1/2½ | 11 |
| Hastings | 1/3 | 11¼ |
| Hatfield | 1/4½ | 1/0½ |
| Haywards Heath | 1/3 | 11¼ |
| Hednesford | 1/5 | 1/0¾ |
| Hemel Hempstead | 1/4½ | 1/0½ |
| Henley | 1/3½ | 11¾ |
| Hereford | 1/3½* | 11¾ |
| Herne Bay | 1/3 | 11¼ |
| Hertford | 1/4½ | 1/0½ |
| Heysham | 1/5½ | 1/1¼ |
| Hitchin | 1/4 | 1/- |
| Hoddesdon | 1/4½ | 1/0½ |
| Holt | 1/1½ | 10¼ |
| Horley | 1/3 | 11¼ |
| Horsham | 1/3 | 11¼ |
| Horwich | 1/5½ | 1/1¼ |
| Huddersfield | 1/5½ | 1/1¼ |
| Hull | 1/5½ | 1/1¼ |
| Hunstanton | 1/2 | 10½ |
| Huntingdon | 1/2½ | 11 |
| Ilfracombe | 1/3½ | 11¾ |
| Ingatestone | 1/3 | 11¼ |
| Ipswich | 1/4½ | 1/0½ |
| Isle of Thanet | 1/3 | 11¼ |
| Isle of Wight | 1/2½ | 11 |
| Keighley | 1/5½ | 1/1¼ |
| Kenilworth | 1/5½ | 1/1¼ |
| Kettering | 1/5 | 1/0¾ |
| Kidderminster | 1/4½ | 1/0½ |
| King's Lynn | 1/3 | 11¼ |
| Kirkham | 1/5½ | 1/1¼ |
| Knowle | 1/5 | 1/0¾ |
| Lancaster | 1/5½ | 1/1¼ |
| Leamington | 1/5 | 1/0¾ |
| Leatherhead | 1/4½ | 1/0¾ |
| Leeds | 1/5½ | 1/1¼ |
| Leicester | 1/5½ | 1/1¼ |
| Leighton Buzzard | 1/2½ | 11 |
| Letchworth | 1/4 | 1/- |
| Lewes | 1/2 | 10½ |
| Lichfield | 1/4½ | 1/0½ |
| Lincoln | 1/5½ | 1/1¼ |
| Littlehampton | 1/3 | 11¼ |
| Liverpool | 1/7‡ | 1/2½ |
| Llandudno | 1/4½ | 1/0½ |
| Llanelly | 1/5½ | 1/1¼ |
| London— | | |
| 12 m. radius | 1/7* | 1/2¼ |
| 12-15 m. radius | 1/6½* | 1/2 |
| Long Eaton | 1/5½ | 1/1¼ |
| Longton | 1/5½ | 1/1¼ |
| Loughborough | 1/5½ | 1/1¼ |
| Louth | 1/4 | 1/- |
| Lowestoft | 1/3½ | 11¾ |
| Luton | 1/5 | 1/0¾ |
| Macclesfield | 1/5 | 1/0¾ |
| Maidenhead | 1/4 | 1/- |
| Maidstone | 1/4 | 1/- |
| Malvern | 1/4 | 1/- |
| Manchester | 1/5½ | 1/1¼ |
| Manningtree | 1/2 | 10½ |
| Mansfield | 1/5½ | 1/1¼ |
| March | 1/2½ | 11 |
| Margate | 1/3 | 11¼ |
| Market Harborough | 1/4½ | 1/0½ |
| Matlock | 1/4 | 1/- |
| Melton Constable | 1/1½ | 10¼ |
| Melton Mowbray | 1/4½ | 1/0½ |
| Merthyr Tydfil | 1/5 | 1/0¾ |
| Middlesbrough | 1/5½ | 1/1¼ |
| Middleton | 1/5½ | 1/1¼ |
| Middlewich | 1/4½ | 1/0½ |
| Milford Haven | 1/3½ | 11¾ |
| Morecambe | 1/5½ | 1/1¼ |
| Morley | 1/5½ | 1/1¼ |
| Mundesley | 1/2½ | 11 |
| Nantwich | 1/4½ | 1/0½ |
| Newark-on-Trent | 1/4½ | 1/0½ |
| Newbury | 1/3 | 11¼ |
| Newcastle-on-Tyne | 1/5½ | 1/1¼ |
| Newcastle-u.-Lyme | 1/5½ | 1/1¼ |
| New Forest | 1/2½ | 11 |
| Newmarket | 1/3½ | 11¾ |
| Newport, Mon. | 1/5½ | 1/1¼ |
| Newport Pagnell | 1/2½ | 11 |
| Northampton | 1/5½ | 1/1¼ |
| Norwich | 1/5 | 1/0¾ |
| Nottingham | 1/5½ | 1/1¼ |
| Nuneaton | 1/5½ | 1/1¼ |
| Oakham | 1/4 | 1/- |
| Oldham | 1/5½ | 1/1¼ |
| Ormskirk | 1/5½ | 1/1¼ |
| Oxford | 1/5 | 1/0¾ |
| Oxted | 1/2½ | 11 |
| Paignton | 1/5 | 1/0¾ |
| Peterborough | 1/5 | 1/0¾ |
| Plymouth | 1/5½† | 1/1¼ |
| Pontypridd | 1/5 | 1/0¾ |
| Portsmouth | 1/4½ | 1/0½ |
| Port Talbot | 1/5½ | 1/1¼ |
| Preston | 1/5½ | 1/1¼ |
| Pulborough | 1/2 | 10½ |
| Ramsgate | 1/3 | 11¼ |
| Reading | 1/4½ | 1/0½ |
| Redcar | 1/5½ | 1/1¼ |
| Redditch | 1/4½ | 1/0½ |
| Redhill | 1/3½ | 11¾ |
| Reigate | 1/3½ | 11¾ |
| Retford | 1/4 | 1/- |
| Ripon | 1/4 | 1/- |
| Rochdale | 1/5½ | 1/1¼ |
| Rochester | 1/4 | 1/0 |
| Rugby | 1/5½ | 1/1¼ |
| Saffron Walden | 1/2 | 10½ |
| St. Albans | 1/5 | 1/0½ |
| St. Helens | 1/5½ | 1/1¼ |
| St. Neots | 1/2½ | 11 |
| Salisbury City | 1/2½* | 11 |
| Salisbury Plain | 1/2½* | 11 |
| Sawbridgeworth | 1/3½ | 11¾ |
| Saxmundham | 1/1½ | 10¼ |
| Scarborough | 1/5 | 1/0¾ |
| Selby | 1/5½ | 1/1¼ |
| Sevenoaks | 1/4 | 1/- |
| Sheerness | 1/3 | 11¼ |
| Sheffield | 1/5½ | 1/1¼ |
| Shipley | 1/5½ | 1/1¼ |
| Shoeburyness | 1/5 | 1/0¾ |
| Shoreham | 1/4 | 1/- |
| Shrewsbury | 1/4½ | 1/0½ |
| Sittingbourne | 1/2½ | 11 |
| Skegness | 1/4½ | 1/0½ |
| Sleaford | 1/4 | 1/- |
| Slough | 1/4½ | 1/0½ |
| Southampton | 1/4½ | 1/0½ |
| Southend on Sea | 1/5 | 1/0¾ |
| Southport | 1/5½ | 1/1¼ |
| South Shields | 1/5½ | 1/1¼ |
| Spalding | 1/3 | 11¼ |
| Stafford | 1/5 | 1/0¾ |
| Staines | 1/4½ | 1/0½ |
| Stamford | 1/4 | 1/- |
| Stevenage | 1/4 | 1/- |
| Stockport | 1/5½ | 1/1¼ |
| Stockton-on-Tees | 1/5½ | 1/1¼ |
| Stoke-on-Trent | 1/5½ | 1/1¼ |
| Stourbridge | 1/5 | 1/0¾ |
| Stourport | 1/4½ | 1/0½ |
| Stowmarket | 1/2 | 10½ |
| Stratford-on-Avon | 1/4 | 1/- |
| Stroud | 1/4† | 1/- |
| Sunderland | 1/5½ | 1/1¼ |
| Sutton Coldfield | 1/5½ | 1/1¼ |
| Swaffham | 1/1½ | 10¼ |
| Swanage | 1/3½* | 11¼ |
| Swansea | 1/5½ | 1/1¼ |
| Swindon | 1/4* | 1/- |
| Tamworth | 1/5 | 1/0¾ |
| Taunton | 1/3½ | 11¼ |
| Tenterden | 1/2½ | 11 |
| Tewkesbury | 1/4* | 1/- |
| Thetford | 1/2 | 10¼ |
| Thorpe Bay | 1/5 | 1/0¾ |
| Todmorden | 1/5½ | 1/1¼ |
| Tonbridge | 1/4 | 1/0 |
| Torquay | 1/5 | 1/0¾ |
| Totnes | 1/3½† | 11¼ |
| Trowbridge | 1/2½* | 11 |
| Truro | 1/2½ | 11 |
| Tunbridge Wells | 1/4 | 1/- |
| Uppingham | 1/4 | 1/- |
| Uttoxeter | 1/4 | 1/- |
| Wakefield | 1/5½ | 1/1¼ |
| Walsall | 1/5½ | 1/1¼ |
| Walsden | 1/5½ | 1/1¼ |
| Walton-on-Naze | 1/3½ | 11¼ |
| Ware | 1/4½ | 1/0½ |
| Warminster | 1/2½* | 11 |
| Warrington | 1/5½ | 1/1¼ |
| Warwick | 1/5 | 1/0¾ |
| Wellingborough | 1/5 | 1/0¾ |
| Wells (Norfolk) | 1/1½ | 10¼ |
| Welwyn | 1/4½ | 1/0½ |
| Welwyn Gar.City | 1/5½ | 1/1¼ |
| West Bromwich | 1/5½ | 1/1¼ |
| Westcliff-on-Sea | 1/5 | 1/0¾ |
| Weston-super-Mare | 1/4½ | 1/0½ |
| Weybridge | 1/4 | 1/- |
| Weymouth | 1/3* | 11¼ |
| Whitby | 1/4½ | 1/0½ |
| Whitstable | 1/3 | 11¼ |
| Widnes | 1/5½ | 1/1¼ |
| Wigan | 1/5½ | 1/1¼ |
| Wigton | 1/4 | 1/- |
| Wellington | 1/5 | 1/0¾ |
| Wilmslow | 1/5½ | 1/1¼ |
| Winchester | 1/3½ | 11¼ |
| Windermere | 1/4 | 1/- |
| Windsor | 1/4½ | 1/0½ |
| Wisbech | 1/2½ | 11 |
| Witham | 1/3½ | 11¾ |
| Woking | 1/3½ | 11¾ |
| Wokingham | 1/3½ | 11¾ |
| Wolverhampton | 1/5½ | 1/1¼ |
| Woodbridge | 1/2½ | 11 |
| Worcester | 1/4½ | 1/0½ |
| Workington | 1/4 | 1/- |
| Worksop | 1/4½ | 1/0½ |
| Worthing | 1/3 | 11¼ |
| Wrexham | 1/5 | 1/0¾ |
| Wroxham | 1/3 | 11¼ |
| Wycombe | 1/4 | 1/- |
| Wymondham | 1/2 | 10½ |
| Yeovil | 1/3½* | 11¾ |
| York | 1/5½ | 1/1¼ |

* Painters, 1d. less than other Craftsmen. † Painters, ½d. less than other Craftsmen. ‡ Plasterers, 1s. 8d.

For Building Trade Wages in Scotland, see page 610.

# CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender, unless stated to the contrary.

*The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.*

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

## BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

### APRIL 1.

**Bentley.**—Removal.—Of temporary school buildings from Green-ln., Skellow, to Kirby-av. school, and alterations to conveniences, for West Riding C.C. Education Officer, County Hall, Wakefield.

**Carlisle.**—Houses.—60 non-parlour 3-bedroom and 48 non-parlour 2-bedroom houses at rear of Wigton-rd. Wesleyan Chapel; also 60 non-parlour 3-bedroom and 28 non-parlour 2-bedroom at Granville-rd., for T.C. P. Dalton, City E., 18, Fisher-st.

**Chelmsford.**—External Painting.—Of 406 houses on Boarded Barns estate, for T.C. V. J. Willis, B.E. and S. Dep. £2 2s.

**Cleethorpes.**—Alterations.—To Kingsway Pavilion, for U.D.C. Leonard W. Pye, E. and S.

**Dundee.**—Houses.—12 two-apartment and 36 three-apartment, at Hospital-st., for T.C. City Quantity S.

**East Retford.**—Houses.—36 on Lidget-lane and Mount Pleasant housing estates, for T.C. B.S. Dep. £2 2s.

**Fareham.**—Installation.—Of heating and hot water supply to isolation hospital, for U.D.C. H. T. Privett, S.

**Gatehouse of Fleet.**—Bungalows.—4 blocks of 2 semi-detached on Market Hill Field and on adjoining field; also erection of 4 blocks of 2 semi-detached bungalows each on said fields, for T.C. R. Lillie, T.C.

**Glasgow.**—Employees' Houses.—At Hawkhead Mental Hospital, Woodilee Mental Hospital and Gartloch Mental Hospital, for T.C. Office of Public Works, City-chams., Room 81. Dep. £2 2s. each contract.

**Islington.**—Demolition.—And rebuilding of premises at rear of 9, Highbury-pl., in Corsica-st., for B.C. E. C. P. Monson, F.R.I.B.A., 120, Moorgate, E.C.2. Dep. £3.

**Leyton.**—Installation.—Of central heating apparatus and domestic hot water supply at Norlington-rd. school, for B.C. J. H. Jacques, F.R.I.B.A. Dep. £1.

**Leyton.**—Erection.—Of fences and levelling and preparing to receive tarpaving of land adjoining Downsell-rd. school to form new playground, for B.C. J. H. Jacques, F.R.I.B.A. Dep. £1.

**Llanelly (Glamorgan).**—Erection.—Of employment exchange, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

**Lydney.**—Houses.—18, at Naas-lane, for R.D.C. G. J. Elliott, S., Highland Villa, Tutnalls. Dep. £2 2s.

**Marlborough.**—Erection.—Of 6 houses at Fyfield, Wilts, for R.D.C. W. Strickland, S. Dep. £1 1s.

**Milnrow.**—Painting.—Of 94 houses on Holt estate and 42, Haugh estate, Newhey, for U.D.C. A. S. Whipp, S.

**Stockport.**—Houses,—172, on Adswood Hall Farm estate, for T.C. Wm. F. Gardner, B.S. Dep. £2 2s.

**Towyn.**—Court Room.—And alterations to existing police buildings, for Merioneth Standing Joint (Police) Committee. N. L. Jones, County Architect, County Offices, Dolgelley. Dep. £3 3s.

**Uxbridge.**—Conversion.—Of Harefield-pl., Harefield-ln., for Middlesex C.C. County Architect, 10, Great George-st., Westminster, S.W.1. Dep. £2 2s.

**Wells.**—Conveniences.—For T.C. City S., 1, Cathedral-green.

### APRIL 2.

**Acton.**—Painting and Repairing.—Footbridge at Rugby-rd., for B.C. B.E.

**Acton.**—Erection.—Of a mortuary, for B.C. B.E. Dep. £2.

***Birmingham.**—Construction.—Of ferro-concrete foundations for two turbo-alternator sets, for two large boilers, concrete ash sluice channels and other works in connection with Hams Hall power station, Lea Marston, Warwickshire, for T.C. City Electrical Engineer, 14, Dale End. Dep. £5 5s.

**Brighton.**—Erection.—Of boundary wall, approx. 280 yds. in length, to properties in London-rd., Withdean, for T.C. D. Edwards, B.E. and S.

**Cambridge.**—Small Branch Library.—In Rock-rd., for T.C. B.E. Dep. £1 1s.

**Hoxne.**—Repair.—And adaptation of farm buildings at Home Farm, Hoxne, for smallholdings purposes, for East Suffolk C.C. County Land Agent, County Hall, Ipswich.

**Lanark.**—Houses.—36 (or 66), at Dean-st., Bellshill, and 24, at Victoria-st., Blantyre, in various trades, for C.C. P. C. Smith, County Housing and Town Planning Engineer, 13, Clydesdale-st., Hamilton.

**Mansfield.**—Relief Offices.—At Mansfield, for Notts C.C. County Architect, Shire Hall, Nottingham. Dep. £1 1s.

**Mansfield.**—Painting.—At Mansfield Police Station, for Notts Standing Joint Committee. County Architect, Shire Hall, Nottingham. Dep. £1 1s.

**Newport (Mon.).**—Bowls Pavilion.—At Belle Vue Park, for T.C. Borough Architect. Dep. £1 1s.

**Plymouth.**—Erection.—Of 191 houses and 20 flats at Moor Farm estate, St. Budeaux, Devonport, for T.C. City Architect. Dep. £2 2s.

**Swansea.**—Installation.—Of electric lighting and heating at library, Oystermouth, for T.C. Borough Architect. Dep £2.

**Wednesfield.**—Demolition.—Of 1, Hadley's-fold, for Staffordshire C.C. R. S. Murt, C.S., County-bldgs., Stafford.

### APRIL 3.

**Blackpool.**—Houses.—4 in Wayman-rd., for T.C. B.S. Dep. £2.

**Brighton.**—Installation.—Of electric light at Warren Farm schools, for E.C. Thomas Simpson & Son, surveyors, 16, Ship-st. Dep. £1.

***Bristol.**—Alterations.—And additions to Bedminster Bridge, St. George's-rd. (Brandon Hill), and Two Mile Hill junior instruction centres, for T.C. M. O. McAuliffe, Chief Education Officer. Dep. £3 3s.

***Chipping Norton.**—Demolition.—And rebuilding of furnishing premises in Market-st., for Co-operative Wholesale Society. L. G. Ekins, F.R.I.B.A., C.W.S., Ltd., Leman-st., London, E.1.

**Edinburgh.**—Heating Engineer's Work.—And painting in connection with alterations, 12, St. Giles-st., for T.C. E. J. MacRae, F.R.I.B.A., City Architect.

**Leek.**—Convenience.—And shelter off Prince-st., for U.D.C. W. E. Beacham, S.

**Monaghan.**—Houses.—31, at workhouse, for U.D.C. Frank Gibney, architect, 16, Westmoreland-st., Dublin. Dep. £5 5s.

**Neath.**—Repairs.—To 1 and 2, Llwynhir-cottages, Benwen, for R.D.C. E. and S., Orchard-st.

**Rochdale.**—Internal Painting.—And decoration at G block, Birch Hill Hospital, for T.C. B.S.

**Uxbridge.**—Exterior Painting.—And interior decorations at isolation hospital, Kingston-ln., Hillingdon, for Joint Hospital Board, William L. Eves, S., 54, High-st.

**Waltham Cross.**—Alterations.—And extension of post office and sorting office, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

**Wembley.**—Erection.—Of brick pavilion at Church-lane recreation ground, Kingsbury, for U.D.C. Treasurer, 117a, High-rd. Dep. £1 1s.

**West Hartlepool.**—Practical Rooms.—In Wharton-ter., for Brougham School, for T.C. Francis Durkin, B.E. Dep. £2 2s.

### APRIL 4.

**Derby.**—Conveniences.—At Parkfields Cedars Secondary School, for T.C. C. H. Aslin, Borough Architect, Gower-st. Dep. £1 1s.

**Glasgow.**—Housing Scheme.—At Blochairn, in various trades, for T.C. D. Stenhouse, T.C.

**Hoole.**—Houses.—60, in Hoole-la., including roadway, sewers, footpaths and fencing, for U.D.C. E. H. Rigby, Clerk. Dep. £2 2s.

**Newcastle-upon-Tyne.**—Houses.—171, on Scotswood estate, 42, on Ferguson's-ln. estate, and 4, on Cowgate estate, for T.C. A. M. Oliver, T.C. Dep. £2 2s.

**Saltcoats.**—Houses.—50, at Rockypark site, in various trades, for T.C. Hugh Thomson & Sons, architects and surveyors, 60, Hamilton-st., Saltcoats.

**Tipton.**—Slating.—Of 8 four-bedroom, 28 three-bedroom, and 8 two-bedroom houses on Moors Mill-ln., Alexandra-rd. and Cotterill-rd., for T.C. R. Gallie, A.R.I.B.A., Housing Director, Sedgley-rd. West.

### APRIL 5.

**Bath.**—Installation.—Of heating and hot water services at station sorting office and garage, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

***Coventry.**—Erection.—Of public baths, Livingstone-rd., Foleshill, for T.C. T.C. Dep. £3 3s.

**Coventry.**—Installation.—Of heating and hot-water supply system at public baths, at Livingstone-rd., for T.C. Frederick Smith, T.C. Dep. £2.

**Doncaster.**—Installation.—Of heating and hot water services at telephone exchange, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

**Essex.**—Erection.—Of public assistance institution, Suttons-lane, Hornchurch, for C.C. J. Stuart, F.R.I.B.A., Chelmsford. Dep. £10 10s.

**Holbeach.**—Homes.—At Holbeach, for Holland C.C. W. M. Smith, architect, County Hall, Boston.

**Peterborough.**—Conveniences.—2, at Walton pumping station, Marholm-rd., and Horse Fair Meadow, London-rd., for T.C. City E. Dep. £2 2s.

**Swinton and Pendlebury.**—School.—At Clifton, for T.C. Director of Education, Folly-ln., Swinton.

### APRIL 6.

**Brighton.**—Installing.—Electric Light.—At Goldstone pumping station, superintendent's house, and four cottages, for T.C. A. B. Cathcart, 12, Bond-st.

**Bristol.**—Erection.—Of buildings for hospital for treatment of mental patients at Barrow Gurney (Somerset), for Corporation. Josiah Green, T.C., Bristol.

**East Grinstead.**—Provision.—And erection of shop front and interior fitting at 146, London-rd., for electricity showrooms, for U.D.C. E. and S.

**Kirkcaldy.**—Houses.—92, at Ramsay-rd., for T.C. B.S.

**Leeds.**—Provision.—Of additional lavatory accommodation at block 3 of North Lodge institution, for T.C. Fred Broadbent, F.R.I.B.A., Executive Officer, Civic Hall. Dep. £1 1s.

**Thorne.**—Mortuary.—And out-offices adjoining chapel at cemetery, for R.D.C. Chas. B. Flockton, architect, 15, St. James'-row, Sheffield, 1.

**Wadsley, nr. Sheffield.**—External Painting.—Of buildings at mental hospital, for West Riding Mental Hospital Board. W. E. H. Burton, architect and engineer, Mental Hospital, Wakefield.

**Worth Valley.**—Improvement.—Of offices at Haworth Lees, for R.D.C. E. B. Nelson, Education Office, Bingley.

### APRIL 8.

**Caerphilly.**—Pavilion.—And other works at isolation hospital, Energlyn, for U.D.C. T. H. Richards, S. Dep. £3 3s.

**Coventry.**—Houses.—206, in six groups, on Bell Green rehousing site, for T.C. City E. Dep. £3 3s.

**Dorking.**—Cottages.—34, in Watson-rd., Westcott, for U.D.C. S. Dep. £2 2s.

***Ealing.**—Erection.—Of health centre at North Greenford, for B.C. B.E. Dep. £3 3s.

**Halifax.**—Houses.—98, at Pye Nest, and 28, at Ling Bob, for T.C. (various trades). D. T. Lloyd Jones, B.E. Dep. £2 2s.

**Heywood.**—Houses.—28, in Peel-ln. and George-st., for T.C. B.S. Dep. £1 1s.

**Lichfield.**—Erection.—Of 14 houses at Curborough-rd., for City Council. C. T. Read. Dep. £2 2s.

***Manchester.**—Provision.—And erection of substation buildings at Sunnyside-ln., Droylsden; Park-rd., Wythenshawe; Sharston Green, Wythenshawe; and Maple-rd., Brooklands, for T.C. H. C. Lamb, E. Dep. £1 1s.

### APRIL 9.

**Aberbargoed.**—Secondary School.—For Monmouthshire C.C. John Bain, F.R.I.B.A., County Hall, Newport, Mon. Dep. £10 10s.

**Haverfordwest.**—Erection.—Of a post office, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

**Wallasey.**—External Painting.—Of 562 houses, and internal painting of 432 houses on various sites, for T.C. B.E. Dep. £2 2s.

### APRIL 10.

***Hornchurch.**—Erection.—Of new block of offices at "Langtons," Billet-ln., for U.D.C. F. Alderson, S. Dep. £5 5s.

**London.**—Erection.—Of telephone exchange at Ponders End, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

**Walsall.**—Erection.—Of two mental blocks at Manor Hospital, Moat-rd., for T.C. T.C. Dep. £3 3s.

**Worcester.**—External Painting.—Of 34 houses, Bromwich-rd., and 24 houses, Bath-rd., for T.C. City E.

### APRIL 11.

***Bedford.**—Extension.—To Langford Council school, for C.C. S. Dep. £1 1s.

**Birkenhead.**—Houses.—23, Bentinck-st. and Bright-st., and 27, Craven-st. and Gordon-st., for T.C. E. S. Ballard, Estates Repairs Supervisor, 59, Hamilton-st.

**Liverpool.**—External Painting.—Of 4,085 houses, flats, shops, etc., on various estates, for T.C. Housing Dept., Municipal Annexe, Dale-st. Dep. £1 1s.

THE
FEDERATED
EMPLOYERS'
Insurance Association Ltd.
HEAD OFFICE:
8, King St., Manchester, 2
The Leading Office for
**Contract Guarantee Bonds**
All Classes of Insurance Transacted
(Except Life and Marine).
Independent Office
Founded by Builders for Builders

**APRIL 12.**

**Dungarvan.**—Technical School.—For Co. Waterford Vocational E.C. J. Lanigan, Chief Executive Officer, Technical School, St. Mary-st. Dep. £3 3s.

✱**Lewisham.**—Erection.—Of central maternity and child welfare clinic, also tuberculosis dispensary, on Priory site in High-st., for M.B. T.C. Dep. £2 2s.

**Roscommon.**—Demolition.—Of existing workhouse building at Boyle, and erection on site of district and fever hospitals, laundries, mortuary, etc., for Board of Health and Public Assistance, J. R. Boyd Barrett, A.R.I.B.A., M.R.I.A.I., 61, South Mall, Cork. Dep. £10 10s.

**Stockport.**—Filter House.—Between Whaley Bridge and Buxton, for T.C. G. H. Hill & Sons (Manchester), engineers, 40, Kennedy-st., Manchester. Dep. £5 5s.

**APRIL 13.**

✱**Brighton.**—Erection.—Of public hall at Rottingdean, for C.B. B.E. and S. Dep. £2 2s.

✱**Bromley.**—Erection.—Of 20 houses in George-ln., Hayes, for B.C. T.C. Dep. £2 2s.

✱**Chester.**—Erection.—Of primary school at Blacon, nr. Chester, for B.C. G. C. Scrimgeour. Dep. £2 2s.

**Folkestone.**—Houses.—32, on Hill-rd. housing estate, for T.C. C. F. Nicholson, T.C. Dep. £2 2s.

**Folkestone.**—Houses.—37, in Fishmarket area, on site of existing houses and stores, for T.C. C. F. Nicholson, T.C. Dep. £2 2s.

**Halifax.**—Erection.—Of Ovenden Senior School, for T.C. D. T. Lloyd Jones, B.E. Dep. £2 2s.

✱**Norwich.**—Erection.—Of 44 flats and 89 houses at Mousehold-av. estate, for T.C. Architectural Dept. Dep. £2.

**Portland.**—Houses.—14, at Avalanche-rd., for U.D.C. S. Dep. £1.

**Smallburgh.**—Painting.—Of cottages in various parishes, for R.D.C. Arthur Peploe, clerk, 25, Grammar School-rd., North Walsham.

**APRIL 15.**

**Bath.**—Houses.—128, at Hollow and Shophouse-rd., Twerton, for T.C. City E. Dep. £3 3s.

✱**Ealing.**—Reroofing.—Of Islips Manor health centre, Northolt, for B.C. B.E. and S. Dep. £1 1s.

**Okehampton.**—Houses.—26, at North-rd. housing estate, together with road, sewer, water main and contingent works, for T.C. R. Alan Brunskill, B.S. Dep. £2 2s.

✱**Rayleigh.**—Erection.—Of six bungalows and other works, for U.D.C. E. and S. Dep. £1 1s.

**Sandy.**—External Painting.—Of 95 houses in Sandy and Boeston, for U.D.C. H. V. James, S., Cambridge-rd.

✱**Southport.**—Erection.—Bowls pavilion, in Victoria Park, for C.B. B.E. Dep. £3 3s.

**Tadcaster.**—Casual Wards.—In various trades, for West Riding C.C. West Riding Architect, County Hall, Wakefield.

**Wakefield.**—Houses.—100 A3 type, on Lupset estate, for T.C. Percy Morris, architect.

**York.**—Houses.—200 and 44 flats, on Water-lane housing estate, for T.C. F. W. Spurr, City E. Dep. £2 2s.

**APRIL 16.**

**Grantham.**—Houses.—106, adjoining New Beacon-rd. and Harrowby-ln., for T.C. P. A. Benn, B.S. Dep. £3 3s.

✱**Swindon.**—Erection.—Of telephone exchange, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1 Dep. £1

**Widnes.**—Houses.—150 on Derby-rd. estate, and for erection of 6 dwelling-houses on Moor-lane estate, for T.C. J. Holt, B.E. Dep. £2 2s.

**APRIL 17.**

**London.** — Construction. — And completion of public baths and washhouses on site bounded by Seymour-pl., Bryanston-pl. and Shouldham-st., W.1, for St. Marylebone B.C. A. W. S. and K. M. B. Cross, 45 and 46, New Bond-st., W.1. Dep. £10.

✱**Portsmouth.** — Alterations. — And additions to head post office and telephone exchange, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

**APRIL 22.**

✱**West Sussex.**—Erection.—Cottage at Slindon, near Chichester, for C.C. C. G. Stillman, F.R.I.B.A., Chichester. Dep. £1 1s.

**West Sussex.**—Demolition.—Of existing cottage and erection of pair cottages at Wick, near Littlehampton, for C.C. C. G. Stillman, F.R.I.B.A., Chichester. Dep. £1 1s.

**APRIL 23.**

**Durham.**—Outside Painting.—Of various police stations and houses, for C.C. William J. Merrett, C.E., S. and Architect, 43, Old Elvet, Durham.

**Manchester.**—Erection.—Of 356 houses, for T.C. Housing Director. Dep. £2 2s.

✱**Whitehaven.**—Erection.—120 houses on Woodhouse site, for T.C. B.E. and S. Dep. £2 2s.

**APRIL 24.**

✱**London.**—Construction.—Of reinforced concrete electricity sub-station at Sutton-st. East, Shadwell, E.1, for Stepney M.B. B.E. and S. Dep. £5.

**APRIL 25.**

✱**Enfield.**—Erection.—Of additional accommodation at Suffolk Schools, Buck-lane, for U.D.C. F. G. Apthorpe, M.A. Dep. £2 2s.

**NO DATE.**

**Blackpool.**—Studio.—Workshops and dressing rooms, for Film Production Studio, Poulton-rd. West, Poulton-le-Fylde. E. D. Dennis, architect, 287, Lytham-rd.

**Brackenbury.** — Repair.—And redecoration of Memorial Church, for Trustees. W. H. Morris, 73, Fortuneswell, Portland.

**Crewe.**—Ward.—At Memorial Hospital, Victoria-ave., for Management Committee. J. Martin, architect, Westminster Chambers, Nantwich-rd. Dep. £2 2s.

## MATERIALS, etc.

**APRIL 1.**

**Chepping Wycombe.**—Bricks.—For T.C. T. J. Rushbrooke, B.S.

**Fareham.**—Tarred Macadam.—For U.D.C. H. T. Privett, S.

**Leyton.**—Supply of furniture for domestic science and practical room at Trumpington-rd. school, for B.C. J. H. Jacques, F.R.I.B.A. Dep. £1.

**Louth.**—Road Materials—For T.C. H. E. Roberts, T.C.

**Mexborough.**—Concrete Flags.—For U.D.C. S.

**APRIL 6.**

**Withnell.**—Road Materials.—For U.D.C. J. Holding, S., Council Offices, Brinscall, near Chorley.

**APRIL 12.**

✱**Leatherhead.**—Supplying.—And fixing seating and other furnishing in Council Chambers, for U.D.C. H. C. Hodges, Clerk. Dep. £1 1s.

**APRIL 15.**

**Tenterden.**—Kent Ragstone Macadam.—For T.C. W. L. C. Turner, B.S.

**NO DATE.**

**Slaithwaite.**—Road Materials.—For U.D.C. S.

## ENGINEERING, IRON AND STEEL

**APRIL 1.**

**Durham.** — Sinking 22-in. Borehole, etc. — At County Mental Hospital. Clerk, Winterton, Stockton-on-Tees. Dep. £1 1s.

**Durham.**—Deep Well.—Borehole turbine pump, etc., at County Mental Hospital. Clerk, Winterton, Stockton-on-Tees. Dep. £1 1s.

**APRIL 3.**

**Dublin.**—Steelwork.—90 tons, for bridge renewal, for Great Southern Rlys. A. W. Bretland, Chief E., Westland Row Station, Dublin. Dep. £2 2s.

**APRIL 6.**

**Addingham.** — Reconstruction. — Of suspension bridge over River Wharfe, for West Riding C.C. West Riding Surveyor, County Hall, Wakefield. Dep. £1.

**Lancashire.**—Reconstruction.—And widening of various bridges in county, for C.C. County Surveyor and Bridgemaster, County Offices, Preston.

**Warwickshire.**—Widening.—Of bridge at Langley Brook, near Bassetts Pole, for C.C. D. H. Brown, C.S., Shire Hall, Warwick.

**APRIL 9.**

**Whittlesey.**—Demolition.—Of existing brick arch bridge and construction of reinforced concrete 20-ft. single-span bridge over King's Dyke, for Isle of Ely C.C. C. E. F. Copeman, Clerk, County Hall, March. Dep. £3 3s.

**APRIL 12.**

**Retford.**—Construction.—Of railway bridge over Babworth level crossing, for Nottinghamshire C.C. C.S., Shire Hall, Nottingham. Dep. £5.

**NO DATE.**

**Weston-super-Mare.**—Bridge.—Over Gt. Western Rly. line, for U.D.C. H. A. Brown, E. and S.

## ROAD, SEWERAGE AND WATER WORKS.

**APRIL 1.**

**Hinckley.**—Making-up.—Of Trinity Vicarage-rd., for U.D.C. J. S. Featherston, S. and E. Dep. £1 1s.

**Leyton.**—Tarpaving.—To land adjacent Downsell-rd. school, to form new playground, for B.C. J. H. Jacques, F.R.I.B.A. Dep. £1.

**Louth.**—Construction.—Of sewerage system at Ardee, for Board of Health, John F. McGahon, E., 9-18, Exchange-bldgs., Dundalk. Dep. £10 10s.

**New Forest.**—Works.—In connection with Eling sewerage and sewage disposal, for R.D.C. W. H. Bateman, Consulting Engineer, Batheaston, Bath. Dep. £10 10s.

**Newport Pagnell.**—Laying.—About 350 yds. of 6 in. iron water mains, construction of well, collecting pipes and manholes, for R.D.C. Taylor & Wallin, E.'s, 1, Saville-place, Newcastle-upon-Tyne. Dep. £5.

**Rawmarsh.** — Making-up. — Of Pottery-st., for U.D.C. J. R. S. Creighton, S., Council Offices, Parkgate, Yorkshire. Dep. £1.

**Rochester.**—Sewering.—Levelling, paving, metalling, flagging, channelling, making good and lighting of Mount-rd., for T.C. W. Law, City S. Dep. £1 1s.

**APRIL 2.**

**London (Willesden).**—Widening.—And asphalt paving works in Dudden Hill-la., between High-rd., Willesden Green and Denzil-rd., for T.C. F. Wilkinson. Town Hall, Dyne-rd., Kilburn, N.W.6. Dep. £10 10s.

**APRIL 3.**

**Acton.**—Making-up.—Of passages at rear of 14-30, Highlands-ave. and 65-75, Churchfield-rd., for T.C. W. G. Cross, B.E. Dep. £1 1s.

**Godstone.**—Laying.—Of 12 in. sewer, approximately 775 yds., in Lingfield Common-rd., for R.D.C. S. Easter, E. and S. Dep. £2 2s.

**Hoole.**—Making.—Number of back passages under Private Street Works Act, 1892, for U.D.C. E. H. Rigby, Clerk. Dep. £1 1s.

**Lewisham.**—Paving.—And forming the roadway and footways of Dunoon-rd., Forest Hill, for T.C. S., Town Hall, Catford (Surveyor's Department).

**Luton.**—Construction of storm-water sewer and reconstruction of Oakley-rd., between Dunstable-rd. and Linden-rd., for T.C. B.E. Dep. £2 2s.

**Luton.**—Construction.—Of approx. 530 yds. of 39-in. dia. concrete tube sewer in Eaton Green-rd., for T.C. J. W. Tomlinson, B.E. and S. Dep. £2 2s.

**West Ham.**—Making-up.—Of Varley-rd., Custom House, and Fawn-rd. and Ravenhill-rd., Plaistow, for T.C. B.E., Town Hall, West Ham, E.15. Dep. £1.

**APRIL 4.**

**Coulsdon and Purley.**—Making-up.—Of Sundale-rd. (part of), for U.D.C. E. C. King, Clerk. Dep. £1 1s.

**Kent.**—Maintenance.—And repairs and additions to tar paving at school premises throughout the county, for E.C. W. H. Robinson, F.R.I.B.A., Springfield, Maidstone.

**Leeds.**—Kerbing.—Flagging and tarmacadamising carriageway in various streets, for Highways Committee. Highways Engineer, 155, Kirkstall-rd. Dep. £1 1s.

**Mickleover.**—Levelling.—Paving, kerbing and tarmacadam surfacing Corden-ave., for approx. 240 yds., for Derbyshire C.C., C.S., Derby. Dep. £1 1s.

**Southend.**—Making-up.—Of various roads, for T.C. R. H. Dyer, B.E. and S. Dep. £1 each street.

**APRIL 5.**

**Slough.** — Making-up. — Of Seymour-rd. and Bourne-rd., for U.D.C. A. Bromly, E., William-st.

**APRIL 6.**

**Wimbledon.**—Making-up.—Of Nursery-rd., for T.C. B.E. Dep. £2 2s.

**APRIL 8.**

**Blackpool.**—Surface Draining.—And formation of Shaftesbury-av., from Devonshire-rd. westwards for 610 lin. ft., for T.C. B.S. Dep. £1.

**Buckingham.**—Sewerage.—And sewage disposal, for T.C. G. Belson Chilvers. E. and S.

**Royton.**—Sewering.—And street works at Haggate Farm building site and Springfield-lane, for T.C. E. and S. Dep. £1 10s.

**Worthing.**—Construction.—Of a concrete road with tarmac footpaths and storm-water disposal system on housing estate, at Angmering, for R.D.C. S. Dep. £2 2s.

**APRIL 9.**

**Bromley (Kent).**—Laying.—Of approx. 6,000 sq. yds. of reinforced concrete foundation, together with contingent works, for T.C. Harold Cliffe, B.E. Dep. £1.

**Cheshunt.** — Making-up.—Of Lordship-rd., for U.D.C. J. E. Sharpe, E. and S. Dep. £2.

**Prescot.**—Making-up.—Of Sinclair-ave. and Hawthorn-rd., for U.D.C. F. A. Gregson, S., 2, West-st. Dep. £1.

## Public Appointments.

**APRIL 1.**

**Greenwich.**—Architectural Assistant (Temporary).—For M.B. T.C.

**APRIL 2.**

**Southampton.**—Three Architectural Assistants (Temporary).—For C.B. T.C.

**APRIL 3.**

**Croydon.**—Engineering Assistant.—For C.B. T.C.

**APRIL 4.**

✱**Plymouth.** — Three Architectural Assistants (Temporary).—For T.C. City Architect.

✱**Orpington.**—Building Inspector (Temporary).—For U.D.C. Clerk.

**APRIL 6.**

**Exeter.**—Architectural Assistant (Temporary).—For T.C. J. Bennett, F.R.I.B.A.

**Leeds.**—Land Surveyor.—For T.C. R. A. H. Livett, A.R.I.B.A.

**Leeds.**—Two Architectural Assistants.—For T.C. R. A. H. Livett, A.R.I.B.A.

**Leeds.**—Clerk of Works (Buildings).—For T.C. R. A. H. Livett, A.R.I.B.A.

**Leeds.**—Clerk of Works (Roads).—For T.C. R. A. H. Livett, A.R.I.B.A.

**Montgomery.**—Architectural Assistant (Temporary).—For C.C. Clerk, Welshpool.

**Norfolk.**—Architectural Assistant (Temporary).—For E.C. Secretary.

**APRIL 8.**

**Essex.**—Architectural Assistant (Grade III.).—For C.C. J. Stuart, F.R.I.B.A., Chelmsford.

✱**London.**—Technical Assistant (Temporary).—For M.B., Shoreditch. T.C., E.1.

✱**London.**—Clerk of Works (Temp.).—For L.C.C. Architect. County Hall, S.E.1.

✱**London.**—Surveyors (Temp.).—For L.C.C. Architect, County Hall, S.E.1.

**APRIL 9.**

✱**Blackpool.**—Clerk of Works.—For C.B. T.C.

✱**Salop.**—Architectural Assistant (Temp.).—For C.C. County Architect, Shrewsbury.

**APRIL 12.**

✱**Stafford.**—Deputy Architect.—For C.C. F. A. Hughes.

✱**Worthing.**—Architectural Assistant.—For B.C. T.C.

**APRIL 13.**

✱**Hull.**—Lecturer in Department of Architecture.—At College of Arts and Crafts, for E.C. R. C. Moore.

**APRIL 15.**

**Durham.**—Two Architectural Assistants.—For C.C. F. Willey, F.R.I.B.A.

✱**Durham.**—Assistant Clerk of Works.—For C.C. F. Willey, F.R.I.B.A.

**MAY 20.**

✱**London.**—Cartographer.—For Admiralty. Secretary, Civil Service Commission, Burlington-gdns., W.1.

**MAY 30.**

**London.**—Assistant Examiners in Patent Office. Secretary, Civil Service Commission, Burlington Gardens, W.1.

**NO DATE.**

✱**Newcastle-upon-Tyne.** — Junior Architectural Assistant (Temp.).—For C.C. R. G. Roberts, F.R.I.B.A.

# CURRENT & PROPOSED BUILDING WORK*

Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.C. for Borough Council; P.C. for Parish Council, M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Engineer; D.S. for District Surveyor; C. for Clerk; T.C. for Town Clerk; C.E. for County Engineer; C.S. for County Surveyor; S. for Surveyor; E. for Engineer.

**Ashton-under-Lyne.**—P. Howard, A.R.I.B.A., 88, Mosley-st., Manchester, architect for mixed selective central school, Springfield, for E.C.—Corporation propose 42 non-parlour type houses on Ladbrooke-rd. and Miller-st. site. Plans by B.S., J. Rowbottom. Estimated cost £16,900.

**Banbury.**—Board of Management of Horton hospital proposes new hospital. Cost £50,000.

**Barnsley.**—S. E. Gelder, Thorncliffe House, Silkstone, near Barnsley, proposing to develop estate at Lundwood for 850 houses. Plans by A. E. Winstanley, L.R.I.B.A., architect, 15, Great Ducie-st., Manchester. No contracts settled.

**Birmingham.**—A. J. White & Styles, architects, 55, Newhall-st., preparing plans for 400 houses at Hall Green estate, Shirley, for A. Silverstone & Co., 118, New-st.

**Bolton.**—Horrocks's (Ridgegate), Ltd., Ridgegate, propose alterations and additions to premises. Architects, Bradshaw, Gass & Hope, FF.R.I.B.A., 19, Silverwell-st. Quantities being prepared.

**Bradford.**—E.C. propose domestic science block at Wyke Council school. Cost £1,100. Also domestic subjects block at Highfield modern school. Cost £1,250.

**Bromley.**—T.C. approved: 24 houses at George-lane, Hayes. Tenders to be invited shortly.

**Bromsgrove.**—Plans approved by U.D.C.:—40 houses, Hazel-rd., Whetty-ln., Rubery, C. L. Holding & Sons.

**Bury.**—Housing Committee have agreed to building of 150 houses on Bridge Farm (Brandlesholme-rd.) estate to house people displaced in slum clearance programme.

**Caernarvon.**—T. J. Hughes, architect, Briton Villa, Llanfairfechan, prepared plans for school and caretaker's house, for Trustees of Siloh Chapel.

**Caerphilly.**—U.D.C. proposes swimming pool. Cost £3,300.

**Carlisle.**—H. E. Scarborough, architect, 22, Lowther-st., preparing plans for development of Knowlefield estate for housing site.

**Chesterfield.**—T.C. approved:—warehouse, Duke-st., Whittington Moor, R. Hicks & Sons.

**Chester-le-Street.**—P. B. Browne & Sons, Pearl-bldgs., Northumberland-st., Newcastle, architects, preparing plans for hotel at Chester-le-Street.

**Cosford.**—Housing Committee to acquire sites for houses at Aldham and Lavenham.

**Coventry.**—T.C. is to make application to M.H. to borrow £32,103 for erecting 110 houses for re-housing purposes. T.C. is to widen Old Church-rd. canal bridge; also to widen Allesley Old-rd., at £35,000 (subject to Transport grant).

**Denton.**—W. G. West, building contractor, Highfield-pk., Breedbury, Stockport, proposes 240 houses on housing estate. Plans by Peirce & Son, 30, St. Petersgate, Stockport.

**Dewsbury.**—Extensions at Mitchell Laithes Isolation Hospital have been approved by Joint Hospital Board.

**Downham Market.**—Town hall to be improved and enlarged.

**Dursley.**—R.D.C. has provisionally approved lay-out for 120 houses, Kingshill-rd.

**Ebbw Vale.**—Council proposes 80 houses, Glyncoed site.

**Easington.**—Plans prepared by Hays & Gray, architects, Wingate, Co. Durham, for 274 houses and 50 bungalows at Wingate, Wheatley Hill and Shotton, for R.D.C. Tenders invited.

**Eastleigh.**—The erection of school is under consideration.

**Gillingham (Kent).**—E.C. to purchase site for school east of Twydall-ln.

**Glamorgan.**—C.C. to build new hospital with maternity wing.

**Gosport.**—T.C. approved erection of branch library, rates office and flats, High-st., Lee-on-Solent. Cost £5,600.

**Hammersmith.**—L.C.C. has sanctioned B.C. borrowing £1,356 for fencing and paving works at Riverside Gardens, and £19,000 for closing and filling in the Creek, Lower Mall. F. Douglas Bartas, Borough Engineer. Sir Brumwell Thomas (architect for new town hall) is instructed to obtain tenders from 4 firms for heating the proposed structure.

**Hexham (Northumberland).**—Tenders to be invited for Methodist church at Hexham. Architects, Davidson, Son and Sherwood, Clayton-st., Newcastle-on-Tyne.

**Horsforth.**—Ind Coope & Allsopp, Ltd., to carry out alterations at the "Bridge Inn," Hawkesworth-rd. Plans by A. & F. Mosleys, Ltd., architects, Wormald-row, Leeds. Tenders being invited.

**Ilford.**—T.C. approved: G. F. Siegerts, garages, 26-48, Abercorn-gdns., 29-63 and 34, 48, 50, 64 and 66, Joydon-dr.; P. Triplete, Ltd., 32 houses, 1-31 and 2-32, Galsworthy-av.; Haines & Warwick, Ltd., 28 houses and garages, Forest-rd.—Plans to be prepared for mortuary at maternity home.—Public convenience at The Wash to be extended at £260.—Tenders to be invited for practical instruction centre at Loxford central school.

**Kidderminster.**—Hurcott Paper Mills, paper manufacturers, Hurcott-rd., are proposing additions to the works and machinery and the installation of a sprinkler plant. Plans by Pritchard, Godwin & Clist, F.R.I.B.A., Bank-bldg. Plans in course of preparation.

**Kirkby-in-Ashfield.**—Miners' Welfare Central Fund Committee propose pithead baths at Bentinck Colliery. Plans by J. H. Forshaw, F.R.I.B.A., Romney House, Marsham-st., London, S.W.1. Estimated cost £19,000.

**Leamington.**—Spa T.C. to erect 50 three-bedroom houses.

**Leamington Spa.**—R. A. C. Churchward, architect, 12, Victoria-st., London, S.W.1, architect for lay-out of Fosse Farm with 1,048 houses and 32 shops.

**Leeds.**—Tenders being invited for erection of factory at Harehills-ln. for Kauffmann Bros., Ltd. C. Castleton, architect, Park-row.—Block of shops, warehouse and offices to be erected, Vicar-ln., for H. Field. Plans by Mr. Charlesworth, architect.

**Lincoln.**—Vicar and Parochial Council of St. Peter's to erect parish hall. Estimated cost £3,000.

**Liverpool.**—Board of Management of Royal Southern Hospital, Caryl-st., propose alterations, etc., and new operating theatre; estimated cost £5,000. Architect, G. Fraser, F.R.I.B.A., Wellington-bldgs., The Strand.—Rev. M. J. O'Sullivan, St. Aloysius Presbytery, Huyton, proposes to erect new schools adjoining church in Twig-ln. Plans by W. Ellis, architect, Union Bank-bldgs., Hardshaw-st., St. Helens.

**London (Bermondsey).**—L.C.C. sanctioned borrowing by B.C. of £7,000 for Alice-st. housing, and £30,188 for Southwark Park-rd. housing.

**London (City).**—Corporation recommend application by E. Howard & Partners, on behalf of City of London Real Property Co., Ltd., to construct 5 bridges across and over the public-way of Bishopsgate-av. at rear of 7-11, Camomile-st.

**London (Hammersmith).** — L.C.C. sanctioned borrowing by B.C. of £15,150 for Emlyn-rd. housing.

**London (Stepney).**—L.C.C. sanctioned borrowing by B.C. of £18,460 for Limehouse Fields housing scheme.

**London (St. Pancras).**—B.C. approved: Block of flats, Gordon House-rd.; building upon the site of 84-92, Camden-rd. and 1, 2 and 3, Lyme-terr.

**Manchester.**—Plans approved by T.C.:—A. Allen, 120, Oxford-rd., Old Trafford, 24 houses, Springbridge-rd., Chorlton-cum-Hardy; Bolvers, Ltd., 30, Brown-st., 28 houses, Altrincham-rd., Parkbrook-rd. and Spinney-rd., Northenden; S. Van den Bergh, Ltd., 11, Albion-mews East, London, W.3, 32 houses, Parkbrook-rd., Northern Etchells; H. Saxon, 27, Brooklands-rd., Crumpsall, 32 houses, Waterloo-st. and Bromfield-av., and 22 houses, Somerfield-rd., Crumpsall; J. E. France, Windsor-av., Northen Etchells, 21 houses, Wilcot-dr., and 24 houses, Heyridge-dr., Palatine-rd., Northenden; J. Partington, Ltd., Wade-st., Middleton Junction, 96 houses, Sandilands-rd., Partington-av., East Grange and Grange-court, Baguly; J. C. Whitelegge, 4, Pennell-st., Clayton, 28 houses, Meade Hill-rd., Windsor-rd. and Northurst-av., Crumpsall; Houselet Development Co., 17, St. Ann's-sq., Manchester, 48 houses, Roundwood-rd., etc., Northenden; Booth & Sons, 14, Holmleigh-av., Blackley, 25 houses, Rushford-st., North-rd., Purcell-st., Barnby-st., Prout-st. and Stainer-st., Longsight.

**Middlesbrough.** — T.C. approved:—22 terrace houses in 3 blocks, 2 of 8 and 1 of 6, West-lane, for Miss Greenwood; 12 pairs semi-detached, Croft-av. and Preen-drive, T. E. F. Whitear.

**Middleton.**—E.C. propose extensions to Elm-st. Council school; estimated cost £11,850. Plans by Borough Architect, J. Pollard, A.R.I.B.A., Town Hall.

**Newcastle-on-Tyne.**—Mineral water factory to be erected in Rosebery-cres. for J. H. Crawford & Sons. J. Walton Taylor, Union-bldgs., St. John-st., architect.—E.C. approved scheme for extending Walkergate school at £12,000.

**Nottingham.**—Site obtained for erection of a paying patients' building for general hospital. Cost £50,000.

**Nottingham.**—Hanson's, Ltd., to erect Two Towers Hotel, Aspley estate.

**Old Fletton.**—Mr. Sheldon, jun., proposes 33 pairs of houses, Whittlesey-rd., Stanground.

**Rotherham.**—Catholic Authorities and Rev. Father William O'Shaughnessy, of St. Bede's, propose elementary school at East Dene housing estate. Architects, Dyson, Cawthorne & Coles, 25, Regent-st., Barnsley.

**Scarborough.**—Plans for rehousing Cross-st. area have been approved by T.C.

**Sheffield.**—T.C. approved:—21 houses, East-rd. and East Bank-rd., G. R. Parkin; 496 houses (Scheme No. 3), Arbourthorne estate, Estates Committee.

**Slough.**—U.D.C. approved erection of 318 houses, Upton Lea estate, by Manor Park Construction Co.

**Southend-on-Sea.**—C.B. passed plans for flats, junction of London-rd. and Woodcote-rd., for C. Hawkes; amended lay-out of portion of the Somerset Garden estate, Prince-av., for A. R. Hook; amended plan of new "Peter Boat" public-house, Prince-av. and Cockethrust-av., for Mann, Crossman & Paulin, Ltd.; 22 houses, Redstock-rd., for H. Winterman.

**South Shields.**—T.C. decided to proceed with harbour tunnel scheme, costing £1,300,000.—T.C. adopted a £32,425 scheme for 67 flats and 3 shops in Commercial-rd. Plans by J. Reid, B.E.—F. Wills, builder, Bents Park estate, proposes developing land for housing near Newcastle-rd. and Wenlock-rd.

**Swansea.**—C.B. passed plans for additions to "Volunteer Arms," Princess-st., for Truman, Hanbury, Buxton and Co., and for alterations, Brynymor Hotel, for Ind, Coope and Allsopps. Highways Committee propose, in five-year programme, execution of following works: Calvert-st., widening at St. Mary's Church, £6,900; A.48, from Swansea Canal to Worcester Works, £50,000; Dolphin Bridge reconstruction and Lower Neath-rd. widening, £37,000; Cadle Bridge reconstruction and diversion of Pontardulais-rd., £12,000; Harbour Trust-rd. (part of scheme amounting to £170,000), £138,000. Libraries Committee propose extension at Central Library for storing 50,000 books, at £2,100.

**Tiverton.**—R.D.C. approved erection of houses at Willand (52) and Silverton (30).

**Tutbury.**—R.D.C. to apply for sanction to borrow £1,916 for erection of houses at Barton-under-Needwood and Tutbury. Plans have also been passed for erection of 37 further houses.

**Walker-on-Tyne.**—The Newcastle E.C. has approved scheme for extensions to Walkergate school. Cost £12,400. Plans by Mr. Harvey, architect, Education Offices, Newcastle-on-Tyne.

**Wallasey.**—Willink & Dod, A.R.I.B.A., Cunard-bldg., Pier Head, architects for boys' and girls' central school in Coronation-av., Upper Brighton, having accommodation for 640 pupils, for E.C.

**Walthamstow.**—B.C. to invite tenders for erecting new branch library, Hale End. Plans by B.S.

**Wantage.**—Plans approved for rebuilding of "Lamb Inn," West Hanney.

**Warrington.**—J. Lane & Sons, Ltd., builders, Morpeth-st., Swinton, propose to develop large estate off Manchester-rd., Woolston, for 300 to 400 houses. Plans by own staff.

**West Hartlepool.**—Plans approved for 232 houses at Foggy Furze for Public Trustee. Plans by J. H. Garry, 47, Church-st., West Hartlepool.

**West Hartlepool.**—F. Durkin has been instructed to prepare plans and estimates for swimming baths and slipper baths.—Plans prepared by F. Durkin, B.E., for alterations to public market and tenders to be invited immediately.—Heslop and Johnson, Upper Church-st., West Hartlepool, are architects for extensive alterations to premises in Park-rd. for W. S. Donaghy. No contracts let.

**Weston-on-Trent.**—Staffs C.C. to invite tenders for erection of bridge over railway on Stone-Rugeley and Stafford-Uttoxeter main roads. Cost £43,963.

**Weymouth.**—Dorset C.C. instructed surveyor to prepare estimate for extending and strengthening seawall opposite to Shorey's Cottage to old borough boundary.

**Whitby.**—U.D.C. proposes public conveniences on beach.

**Whitehaven.**—T.C. approved: Lay-out and designs for erection of 120 houses on Woodhouse site. Borough Surveyor has also been instructed to prepare lay-out and designs for erection of 166 houses on remainder of Woodhouse housing site.

**Wigan.**—Governors of Wigan & District Mining and Technical College propose pavilion, at £2,000.

**Winchester.**—City Council proposes market, Hyde Lodge, Andover-rd., at £9,300.

**Woking.**—U.D.C. approved: 34 houses in Hollies-ave., Sheerwater estate, and Methodist church in Broadway, Knaphill.

**Wolverhampton.**—Plans approved by T.C.:—182 houses, Showell-rd., Manley & Regulus, Ltd.

**Worksop.**—T.C. propose 86 houses, Lincoln-st. site. Plans by B.S.—Construction of bridge over canal at £6,440. Preliminary designs by British Reinforced Concrete Engineering Co., Ltd., Stafford, in conjunction with B.S. Contracts not let.

**Wotton-under-Edge.**—Parish Council to apply for 40 houses.

**York.**—Public abattoir to be erected in Navigation-rd.

* See also List of Contracts open.

*** **In these lists every care is taken to ensure that information given is accurate and up to date. but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced.**

**Now Published — 5th Edition**

Revised throughout and greatly enlarged, superseding all previous issues.

**HOW TO ESTIMATE**

**FOR EVERY CLASS OF BUILDING WORK**

**By J. T. REA.**

Containing 726 pages with over 600 illustrations.
Large 8vo. Cloth gilt. Price 16/- net.
(By post 16/9.)

**The new edition of this unique work represents, in fact, quite a new undertaking, brought up-to-date in every way, including a large amount of original memoranda, complete revision of prices, examples of analysis, and fresh details of costing, involving many thousands of figures, hundreds of calculations, and immense labour and research. Being self-contained, it avoids the weary hunt in other books for the vital, detailed knowledge which is usually hard, if not often impossible, to find.**

**B. T. BATSFORD, LTD.**

*Architectural Publishers,*

**15, North Audley Street, London, W.1.**

# PRICES CURRENT OF MATERIALS.*

**Owing to the exceptional circumstances which prevail at the present time prices of materials should be confirmed by inquiry.**

**PRINCIPAL CHANGES OF THE WEEK.—Sheet lead, pipe in coils and old lead advance by £1. 10s. per ton.**

## BRICKS, &c.

Per 1,000 Alongside, in River Thames up to Mortlake.

| | £ s. d. |
|---|---|
| Best Stocks | 4 2 0 |
| Second Hard Stocks | 3 10 0 |

Per 1,000. Delivered at London Goods Stations.

| | £ s. d. | | £ s. d. |
|---|---|---|---|
| "Phorpres" | *2 8 3 | Flettons, B'll'n'se | 3 6 3 |
| Flettons at King's Cross | *2 8 3 | Best Blue Pressed Staffs | 8 5 0 |
| Do., grooved for Plaster | *2 10 3 | Do. Bullnose | 8 15 0 |
| | | Blue Wire Cuts | 7 0 0 |

White Midhurst Facing Bricks (delivered London site) £ 0 0

"Phorpres" whites (King's Cross) *3 11 3

"Phorpres" Rustic Facings (King's Cross) *3 6 3

Best Stourbridge Fire Brick:—

| | | | |
|---|---|---|---|
| 2½ in. | 7 15 0 | 3 in. | 8 15 0 |

*Delivered to site in W.C. district, 6s. extra per 1,000.

GLAZED BRICKS—

| | | | |
|---|---|---|---|
| Best White | | D'ble Str'tch'rs | 29 10 0 |
| Ivory and Salt Glazed Stretcher | 21 0 0 | D'ble Headers | 26 10 0 |
| | | One side and two Ends | 30 10 0 |
| Headers | 20 10 0 | Two sides and one End | 31 10 0 |
| Quoins, Bullnose and 4½ in. Splays | | | |
| Flats | 27 10 0 | Squints | 28 0 0 |

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

## PARTITION SLABS.

Delivered London Area.

CLINKER CONCRETE.

| | | | |
|---|---|---|---|
| 2" per yd. sup. | 1 6 | 3" per yd. sup | 2 0 |
| 2½" " " | 1 8 | 4" " " | 2 4 |

CRANHAM TERRA COTTA.

| | | | |
|---|---|---|---|
| 2" per yd. sup. | 3 0 | 3" per yd. sup. | 3 8 |
| 2½" " " | 3 6 | 4" " " | 4 7 |

HEMPSTEAD—KEYED TWO SIDES.

| | | | |
|---|---|---|---|
| 12" x 9" x 2" | 2 3 | 12" x 9" x 3" | 2 9 |
| 12" x 9" x 2½" | 2 6 | 12" x 9" x 4" | 3 6 |

Per yard super d/d. Free on site, London.

| | s. d. | |
|---|---|---|
| Thames Ballast | 7 3 per yd. | delivered 2 miles radius Paddington. |
| Pit Ballast | 6 3 " " | |
| Pit Sand | 7 9 " " | |
| Washed Sand | 8 3 " " | |
| ¾ in. Shingle | 7 3 " " | |
| ¾ in. Broken Brick | 11 3 " " | |
| Pan Breeze | 8 3 " " | |

## CEMENT.

Best British Portland Cement, Standard Specification, delivered London Area in jute sacks (11 to ton), or paper bags (20 to ton) free (non-returnable):—

| | £ s. d. |
|---|---|
| 4 ton loads and upwards site Per ton. | 2 0 0 |
| 1 ton to 4 tons site | 2 2 0 |
| Alongside Vauxhall in 80-ton lots | 1 16 0 |
| "Ferrocrete" Rapid Hardening Cement:— | |
| 4 ton loads and upwards site | 2 6 0 |
| 1 ton to 4 tons site | 2 8 0 |
| Alongside Vauxhall in 80-ton lots | 2 2 0 |

NOTE.—Jute sacks are charged 1s. 6d. each and credited 1s. 6d. nett if returned in good condition within three months, carriage paid.

| | |
|---|---|
| "Colorcrete" Nos 1 and 2 Coloured Rapid Hardening Portland Cement in 1 cwt. paper bags free (non-returnable) in 1-ton lots and upwards site | £ 0 0 |
| "Snowcrete" White Portland Cement in 1 cwt. paper bags free (non-returnable) 1 ton and upwards site | £ 15 0 |
| Super Cement (Waterproof) paper bags free | 3 10 0 |
| Roman Cement | 6 15 0 |
| Parian Cement | 5 15 0 |
| Keene's Cement, White | £ 15 0 |
| " " Pink | £ 10 0 |

## PLASTER.

| | |
|---|---|
| Plaster, Coarse, Pink | £ 12 0 |
| " " White | 2 17 6 |
| " Fine | 5 0 0 |
| Sirapite, Coarse | 3 5 0 |
| " Finish | 3 13 0 |
| Grey Stone Lime | 2 2 0 |
| Chalk Lime | 2 2 0 |
| Best Ground Blue Lias Lime | 1 17 6 |
| Hair per cwt. | 2 2 6 |
| Granite Chippings | 1 12 0 |

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d., if returned in good condition within three months carr. pd.

Stourbridge Fireclay in sacks 37s. 0d. per ton at rly. dep

## STONE.

| | s. d. |
|---|---|
| BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube | £ 10 |
| BEER STONE—RANDOM BLOCK— | |
| Free on rail at Seaton Station, per ft. cube | £ 3 |
| Delivered free on rail Nine Elms, S.R. per ft. cube | 1½ |
| Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra. | |
| PORTLAND STONE— | |
| Brown Whitbed, in random blocks of 20ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube | 4 4½ |
| Do. do. delivered on road waggons at above stations, per ft. cube | 4 5½ |
| White basebed, 3d. per ft. cube extra. | |
| NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft. | |
| HOPTON-WOOD STONE— | |
| F.O.R. Quarries Wirksworth, Derbyshire, Random blocks from 10ft. and over P.ft.cb. | £. s. d. 14 0 |
| Sawn two sides | 22 6 |
| Sawn, three or four sides | 27 9 |
| CHILMARK—RANDOM BLOCK— | |
| At Nine Elms, per ft. cube | 3 11 |
| YORK STONE, BLUE—*Robin Hood Quality.* | |
| Delivered at any Goods Station London. | |
| 6 in. sawn two sides landings to sizes (under 30 ft. super) Per ft. super | 1 6 |
| 6 in. rubbed two sides, ditto " | 6 0 |
| 3 in. sawn two sides slabs (random sizes), " | 2 3½ |
| 3 in. to 2½ in. sawn one side slabs (random sizes) " | 3 6½ |
| 1½ in. to 2 in., ditto " | 3 3½ |
| HARD YORK— | |
| Delivered at any Goods Station, London. | |
| Scappled random blocks Per ft. cube | 0 3 |
| 6 in. sawn two sides landing to sizes (under 40 ft. super) Per ft. super | 1 1½ |
| 6 in. rubbed two sides, ditto " | 6 1½ |
| 4 in. sawn two sides slabs (random sizes), " | 3 1½ |
| 3 in. ditto ditto " | 2 8 |
| 3 in. self-faced random flags Per yd. super | 7 6 |

## CAST STONE.

Delivered in London area in full van loads, per ft cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d.

## SOFT WOOD.

GOOD BUILDING DEAL.

| Inches. | Per stan. | Inches. | Per stan. |
|---|---|---|---|
| 4 × 11 | £23 10 | 3 × 6 | £18 10 |
| 4 × 9 | 22 10 | 3 × 11 | 19 10 |
| 4 × 8 | 21 0 | 2 × 11 | 19 10 |
| 4 × 7 | 19 0 | 3 × 9 | 19 10 |
| 3 × 8 | 17 10 | 2½ × 9 | 19 10 |
| 3 × 7 | 18 0 | 3 × 4½ | 17 10 |
| 2½ × 7 | 18 0 | 3 × 4 | 17 10 |

PLANED BOARDS.

| | | | |
|---|---|---|---|
| 1 × 11 | £22 10 | 1 × 9 | £21 |

PLAIN EDGE FLOORING.

| Inches. | per sq. | Inches. | per sq. |
|---|---|---|---|
| ¾ | 16/- | 1¼ | 25/- |
| ⅝ | 17/- | 1½ | 31/6 |
| | 19/- | | |

TONGUED AND GROOVED FLOORING.

| Inches. | per sq. |
|---|---|
| 1 | 21/- |
| 1¼ | 26/- |
| 1½ | 32/6 |

MATCHING (BEST).

| Inches. | per sq. |
|---|---|
| ⅝ | 16/- |
| ¾ | 18/6 |
| 1 | 22/6 |

| ins. BATTENS. | s. d. |
|---|---|
| ¾ × 2 per 100 ft. | 2 6 |

| SAWN LATHS. | s. d. |
|---|---|
| Per bundle | 2 3 |

## HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality.

| | £ s. d. |
|---|---|
| Dry Austrian Wainscot, per ft. cube | 0 15 0 |
| Dry American and/or Japanese Figured Oak, per ft. cube | 0 12 0 |
| Dry American and/or Japanese plain Oak, per ft. cube | 0 10 0 |
| Dry sq. edged Honduras Mahogany, per ft. cube | 0 14 0 |
| Dry log-cut Honduras Mahogany, per ft. cube | 0 16 0 |
| Dry Cuba Mahogany, per ft. cube | 1 1 0 |
| Dry Teak, per ft. cube | 0 14 0 |
| Dry American Whitewood, per ft. cube | 0 10 0 |
| Best Scotch Glue, per cwt. | 3 0 0 |
| Liquid Glue, per cwt. | 4 7 0 to 5 10 0 |


# HUDDERSFIELD Building Society

Ample funds are available to assist in house purchase. Builders with sound schemes of development are invited to consult with the Society.

Branches throughout the Country.

Write for the Folder "Mortgage Facilities" to The Huddersfield Building Society, Britannia House, 203, Strand, London, W.C.2, or from the Head Office, Britannia Buildings, Huddersfield. Andrew Stewart, C.A., Managing Director.

**WHEN YOU INVEST--A HOUSE IS BEST!**


## SLATES.

First quality slates from Bangor or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

| | £ s. d. | | £ s. d. |
|---|---|---|---|
| 24 by 12 .. | 29 15 0 | 18 by 10 .. | 15 12 6 |
| 22 by 12 .. | 25 0 0 | 18 by 9 .. | 13 15 0 |
| 22 by 11 .. | 22 10 0 | 16 by 10 .. | 13 10 0 |
| 20 by 12 .. | 22 0 0 | 16 by 8 .. | 10 7 6 |
| 20 by 10 .. | 19 7 6 | | |

## TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons.

| | Per 1,000 f.o.r. London |
|---|---|
| Best machine-made tiles from Broseley or Staffordshire district | £4 7 0 |
| ditto hand-made ditto | 5 0 0 |
| Ornamental ditto | 5 8 6 |
| Hip and valley tiles (per dozen) Hand-made | 0 9 6 |
| Machine-made | 0 9 0 |

## METALS.

| | £ s. d. |
|---|---|
| JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON— | |
| R.S. Joists, cut and fitted | £11 10 0 |
| Plain Compound Girders | 13 10 0 |
| " Stanchions | 16 0 0 |
| In Roof Work " | 18 10 0 |

MILD STEEL ROUNDS.—To London Station, per ton.

| Diameter. | £ s. d. | Diameter. | £ s. d. |
|---|---|---|---|
| ¼ in. | 12 0 0 | ⅜ in. to ½ in. | 10 15 0 |
| ⅝ in. | 11 0 0 | ⅝ in. to 2⅝ in. | 10 10 0 |

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

| | Standard Wrot. Mild Steel Tubes and Tubulars Sizes ⅛ in. to 6 in. | Genuine Wrot. (Puddled) Iron Tubes and Tubulars Sizes ⅛ in. to 6 in. | Standard Fittings Sizes ⅛ in. to 6 in. | Standard Flanges Sizes ⅛ in. to 6 in. |
|---|---|---|---|---|
| | % | % | % | % |
| Gas | 65 | 52½ | 57½ | 70 |
| Water | 61½ | 48½ | 52½ | 65 |
| Steam | 57½ | 45 | 47½ | 60 |
| Galv. gas | 52½ | 40 | 47½ | 60 |
| Galv. water | 47½ | 35 | 42½ | 55 |
| Galv. steam | 42½ | 30 | 37½ | 50 |

C.I. HALF-ROUND GUTTERS—London Price ex Works

| Per yd. in 6 ft. lengths. | Gutters. | Angles and Stop Nozzles. | Stop Ends. |
|---|---|---|---|
| 3 in. | 1/5½ | 1/1½ | 4½d. |
| 3½ in. | 1/6½ | 1/3 | 5½d. |
| 4 in. | 1/8½ | 1/4½ | 6½d. |
| 4½ in. | 1/8 | 1/6½ | 9½d. |
| 5 in. | 1/10½ | 1/8½ | 10d. |

O.G. GUTTERS.

| | | | |
|---|---|---|---|
| 3 in. | 1/7½ | 1/5½ | 7d. |
| 3½ in. | 1/9½ | 1/5½ | 7½d. |
| 4 in. | 1/11 | 1/6½ | 8½d. |
| 4½ in. | 2/0 | 1/9½ | 9½d. |
| 5 in. | 2/4½ | 2/0½ | 11½d. |

RAIN WATER PIPES, &c.

| Per yd. in 6 fts. | Pipe. | Bends, stock Branches, angles, stock angles. | |
|---|---|---|---|
| 2 in. | 2/2½ | 1/4½ | 2/0 |
| 2½ in. | 2/3½ | 1/6½ | 2/4½ |
| 3 in. | 2/9½ | 1/11 | 2/10½ |
| 3½ in. | 3/3½ | 2/3½ | 3/3½ |
| 4 in. | 3/9 | 2/9 | 4/0 |

Less 20 per cent. trade discount.

Tonnage allowance—4 ton lots, 5 per cent.
2 ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices ex Stock.

| | Pipe, | Bends, stock Branches, angles, stock angles | | | |
|---|---|---|---|---|---|
| | s. d. | s. d. | | s. d. | |
| 2 in. per yd. in 6 fts. | 2 9¾ | 2 0 | | 2 5½ | |
| 2½ in. " | 3 2 | 2 2½ | | 3 0½ | |
| 3 in. " | 3 6 | 2 5½ | | 3 7½ | |
| 3½ in. " | 3 9½ | 3 0¼ | | 4 2½ | |
| 4 in. " | 4 2½ | 3 4¾ | | 4 10½ | |

L.C.C. COATED DRAIN PIPES—London Prices ex Stock.

| | Pipe, | angles, stock angles. | |
|---|---|---|---|
| | s. d. | s. d. | s. d. |
| 4 in. per yd. in 9 ft. lengths | 3 4½ | 4 3 | 7 0 |
| | cwt. qr. lbs. | | |
| 4 in. " | 1 1 20 .. | 5 1 | 5 0 | 8 9 |
| 5 in. " | 1 2 22 .. | 6 6 | 8 9 | 13 6 |
| 6 in. " | 2 0 6 .. | 7 6 | 10 3 | 18 0 |

Gaskin for jointing 41/- per cwt.

| IRON— | Per ton in London. £ s. d. | | £ s. d. |
|---|---|---|---|
| Common bars | 10 0 0 | to | 10 10 0 |
| Staffordshire Crown Bars— | | | |
| Good merchant quality | 10 10 0 | to | 11 0 0 |
| Staffordshire Marked Bars | 14 0 0 | .. | 15 0 0 |
| Mild Steel Bars | 9 0 0 | .. | 10 0 0 |
| Steel Bars, Ferro-Concrete quality, basis price | 8 10 0 | .. | 9 0 0 |
| Hoop iron, basis price | 11 0 0 | .. | 12 0 0 |
| " Galvanised | 27 10 0 | .. | 28 10 0 |

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

## PRICES CURRENT OF MATERIALS—(*contd.*).

| | Per ton in London. £ s. d. | £ s. d. |
|---|---|---|
| **IRON—** | | |
| Soft Steel Sheets, Black— | | |
| Ordinary sizes, to 20 g. .... | 11 0 0 .. | 11 10 0 |
| ,, ,, ,, 24 g. .... | 12 0 0 .. | 13 0 0 |
| ,, ,, ,, 26 g. .... | 14 0 0 .. | 15 0 0 |
| Sheets Flat Best Soft Steel, C.R. and C.A. quality— | | |
| Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g. .. | 14 0 0 .. | 15 0 0 |
| Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g. ..... | 15 0 0 .. | 16 0 0 |
| Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g..... | 17 10 0 .. | 18 10 0 |
| No. 1 quality £4 per ton extra. | | |
| Flat and Galvanised Corrugated Sheets— | | |
| Ordinary sizes, 6 ft. to 9 ft. to 20 g. ..... | 13 10 0 .. | 15 0 0 |
| Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g... | 15 10 0 .. | 16 10 0 |
| Ordinary sizes, 6 ft. to 9 ft. to 26 g. ..... | 16 10 0 .. | 18 0 0 |
| Sheets, Galvanised, Flat, Best quality— | | |
| Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker ..... | 14 10 0 .. | 16 10 0 |
| Best Soft Steel Sheets, 22 g. and 24 g. ..... | 15 0 0 .. | 17 0 0 |
| Best Soft Steel Sheets, 26 g. ..... | 16 10 0 .. | 18 0 0 |
| Cut Nails, 3 in. to 6 in. .... | 15 10 0 .. | 17 0 0 |
| (Under 3 in. usual trade extras.) | | |

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

## COPPER.

| | | s. d. |
|---|---|---|
| Seamless Copper tubes (basis) ..... | per lb. | 0 9 |
| Strong sheet ..... | ,, | 0 10 |
| Thin ..... | ,, | 0 11 |
| Copper nails ..... | ,, | 1 0 |
| Copper wire ..... | ,, | 0 11 |

## PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

| ½ in. | ¾ in. | 1 in. | 1¼ in. | 1½ in. | 2 in. | |
|---|---|---|---|---|---|---|
| 29/- | 45/- | 76/- | 153/- | 246/- | 510/- | per doz. |

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

| ½ in. | ¾ in. | 1 in. | 1¼ in. | 1½ in. | 2 in. | |
|---|---|---|---|---|---|---|
| 41/6 | 62/- | 92/- | 174/- | 300/- | 588/- | per doz. |

RIVER PATTERN SCREW DOWN MAIN FERRULES.

| ½ in. | ¾ in. | 1 in. | |
|---|---|---|---|
| 39/- | 60/- | 116/6 | per doz. |

CAPS AND SCREWS.

| 1¼ in. | 1½ in. | 2 in. | 3 in. | 3½ in. | 4 in. | |
|---|---|---|---|---|---|---|
| 7/6 | 10/- | 14/- | 23/- | 30/- | 42/- | per doz. |

DOUBLE NUT BOILER SCREWS.

| ½ in. | ¾ in. | 1 in. | 1¼ in. | 1½ in. | 2 in. | |
|---|---|---|---|---|---|---|
| 7/6 | 11/- | 17/- | 29/- | 36/- | 63/- | per doz. |

BRASS SLEEVES.

| 1¼ in. | 2 in. | 3 in. | 3½ in. | 4 in. | |
|---|---|---|---|---|---|
| 10/- | 12/- | 20/- | 24/- | 31/- | per doz. |

NEW RIVER PATTERN CROYDON BALL VALVES S.F.

| ½ in. | ¾ in. | 1 in. | 1¼ in. | 1½ in. | |
|---|---|---|---|---|---|
| 35/- | 56/- | 98/- | 162/- | 228/- | per doz. |

DRAWN LEAD P. & S. TRAPS WITH GLASS CLEANING SCREW.

| | 1¼ in. | 1½ in. | 2 in. | 3 in. | |
|---|---|---|---|---|---|
| 8 lbs. P. traps .... | 33/- | 41/- | 56/- | 101/- | per doz. |
| 8 lbs. S. traps .... | 35/- | 45/- | 66/- | 126/- | per doz. |

TIN.—English Ingots, 2/5 per lb. SOLDER.—Plumbers' 1/-, Tinmen's, 1/2, Blowpipe, 1/3 per lb.

## LEAD, &c.

| (Delivered in London.) | £ s. d. |
|---|---|
| LEAD.—Sheet, English, 4 lb. and up..... | 19 10 0 |
| Pipe in coils ..... | 19 0 0 |
| Soil pipe..... | 25 5 0 |
| Compo pipe ..... | 26 10 0 |

NOTE.—Country delivery, 20/- per ton extra lots under 3 cwt. 4/- per cwt. extra, and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- cwt. extra.

Old lead, ex London area, at Mills..... per ton £11 5 0

## PAINTS, &c.

| | £ s. d |
|---|---|
| Raw Linseed Oil, in pipes .....per gallon | 0 2 5 |
| ,, ,, ,, in barrels .... ,, | 0 2 7 |
| ,, ,, ,, in drums .... ,, | 0 2 9 |
| Boiled ,, ,, in barrels .... ,, | 0 2 10 |
| ,, ,, ,, in drums .... ,, | 0 3 0 |
| Turpentine, in barrels ..... ,, | 0 4 5 |
| ,, in drums (10 galls.).. ,, | 0 4 7 |
| Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks.) | 43 0 5 |

Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt.

GENUINE WHITE LEAD PAINT.
"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots per ton delivered £ s. d. 61 0 0

| | | |
|---|---|---|
| Red Lead, Dry (packages extra) ....per ton | 31 | 0 0 |
| Best Linseed Oil Putty ..... per cwt. | 0 | 13 6 |
| Size. XD quality ..... fkn. | 0 | 3 0 |

## VARNISHES, &c.

| | | Per gallon |
|---|---|---|
| Oak Varnish .....Outside | | 0 14 0 |
| Fine Do. ..... | Do. | 0 16 0 |
| Fine Copal ..... | Do. | 0 18 0 |
| Pale Copal ..... | Do. | 1 0 0 |
| Pale Opal Carriage ..... | Do. | 1 4 0 |
| Best Do. ..... | Do. | 1 12 0 |
| Floor Varnish .....Inside | | 0 18 0 |
| Fine Pale Paper ..... | Do. | 0 18 0 |
| Fine Copal Cabinet ..... | Do. | 1 2 0 |
| Fine Copal Flatting ..... | Do. | 1 0 0 |
| Hard Drying Oak..... | Do. | 0 18 0 |
| Fine Hard Drying Oak ..... | Do. | 0 19 6 |
| Fine Copal Varnish ..... | Do. | 1 0 6 |
| Pale Do. ..... | Do. | 1 12 0 |
| Best Do. ..... | Do. | 1 2 6 |
| Best Japan Gold Size ..... | | 0 12 6 |
| Best Black Japan..... | | 0 10 0 |
| Oak and Mahogany Stain (water) ..... | | 0 12 0 |
| Brunswick Black ..... | | 0 7 6 |
| Berlin Black ..... | | 0 14 0 |
| Knotting (patent)..... | | 0 15 0 |
| French and Brush Polish ..... | | 0 12 0 |
| Liquid Dryers in Terebene ..... | | 0 9 0 |
| Cuirass Black Enamel ..... | | 0 7 0 |

## GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

| | per ft. | | per ft. |
|---|---|---|---|
| 15 oz. fourths .. | 2⅜d. | 32 oz. fourths ..... | 6½d. |
| 15 ,, thirds .... | 2⅜d. | 32 ,, thirds ..... | 8½d. |
| 21 ,, fourths .. | 3½d. | Obscured Sheet, 15 oz. | 3d. |
| 21 ,, thirds .... | 3⅞d. | ,, ,, 21 ,, | 4½d. |
| 26 ,, fourths .. | 4½d. | Fluted, 15 oz. 6½d.,21 oz. 9d. | |
| 26 ,, thirds .... | 5⅛d. | Em'lld, 15 oz. 4½d.,21 oz. 5½d. | |

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

| | Per ft. |
|---|---|
| Rolled plate ¼ in. ..... | 4⅜d. |
| Rough rolled $\frac{3}{16}$ in. ..... | 5⅛d. |
| Rough rolled ¼ in. ..... | 5⅜d. |
| Figured, Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White.... | 5½d. |
| Do. tinted ..... | 8d. |
| Rolled Sheet ..... | 5d. |
| White Rolled Cathedral ..... | 5d. |
| Tinted Do. ..... | 7½d. |

Cast plate is same price as rough rolled.

| "VITA" GLASS. | Per ft s. d |
|---|---|
| Clearsheet—not exceeding 1 foot ..... | 1 0 |
| Do. do. 2 feet ..... | 1 3 |
| Do. over 2 feet ..... | 1 9 |
| Polished plate—not exceeding 1 foot ..... | 1 6 |
| Do. do. 2 feet ..... | 3 0 |
| Cathedral—not exceeding 1 foot ..... | 1 0 |
| Do. larger sizes ..... | 1 6 |
| Horticultural Sheet and Cathedral "Vita" Glass. Sizes up to 24 inches by 18 inches or not exceeding 3 feet ..... | 1 0 |
| 3/16 in. Wired Georgian Design. Sizes up to 96 inches long by up to 24 inches wide..... | 2 9 |

# BUILDING TRADE WAGES IN SCOTLAND*

Following are grade rates authorised by the Scottish N.J.C. for the Building Industry. Painters by ruling of the Scottish National Painters' and Decorators' Joint Council, have from January 1 new rates. Grade A towns, 1/6 per hour; Grade B, 1/4; Aberdeen has a special rate of 1/5½. The new rate for Plasterers has been fixed at 1s. 6½d. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

| Grade Classification.... | A | A¹ | A² | A³ | B | B¹ | B² | B³ |
|---|---|---|---|---|---|---|---|---|
| Craftsmen .... .... | 1/6 | 1/5½ | 1/5 | 1/4½ | 1/4 | 1/3½ | 1/3 | 1/2½ |
| Labourers .... .... | 1/1½ | 1/1¼ | 1/0¾ | 1/0½ | 1/0 | /11¾ | /11¼ | /11 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Aberdeen .....A | Dundee .....A | Hawick .....A² | Perth .....A |
| Airdrie.....A | Dunfermline ...A | Helensburgh ...A | Perthshire .....A² |
| Alexandria .....A | Dunoon .....A | Inverness .....B | Peterhead .....A² |
| Arbroath.....A | East Lothian...A | Kilmarnock...A | Renfrewshire .....A |
| Ayrshire .....A | Edinburgh .....A | KincardineshireA² | Rothesay .....A |
| Bathgate.....A | Falkirk .....A | Kinross-shire ...A | Roxburghshire ...A² |
| Bo'ness .....A | Forfarshire ...A² | Kirkcaldy .....A | St. Andrews .....A |
| Broughty Ferry ...A | Fort William B | Lanarkshire ...A | Selkirkshire .....A |
| Clackmannanshire...A | Galashiels .....A² | Leith .....A | Stirling .....A |
| Coatbridge .....A | Glasgow .....A | Midlothian .....A | Stirlingshire, WestA |
| Dumbartonshire ...A | Greenock.....A | Motherwell ...A | West Lothian ...A |
| Dumfries.....A² | Hamilton .....A | Peeblesshire ...A² | Wishaw .....A |
| Dumfriesshire.....A² | | | |

* The information given in this table is copyright. The rates of wages in various towns in England and Wales are given on page 610.

# THE SCOTTISH BUILDER

## NEW BUILDINGS

ABERDEEN.—BATHS.—T.C. to purchase site in Justice Mill-lane for new baths.

GRANGEMOUTH.—HOUSES.—T.C. to erect 68 houses on old side of the town and eight houses at Almond-row in the new town.

DUMFRIES.—HOUSES.—Dean of Guild Court has passed plans for the erection of 116 houses at the Nithside site, by the T.C., at an estimated cost of £36,000; in addition, plans for the erection of 18 houses by private enterprise were passed.

DUNDEE.—STORE.—Great Universal Stores, Ltd., have acquired a large block of property at the junction of Wellgate with Charles-street for the erection of a store.

EDINBURGH.—EXTENSIONS.—Plans prepared for G. A. Royce and Co., motor engineers, for scheme of reconstruction and additions at the Palais-de-Dance, Picardy-place, for new showrooms, etc. Mr. A. W. Grant, architect, 25, Rutland-square, Edinburgh.

FERGUSLIE.—GARAGE.—Plans prepared for new garage, showroom, and other offices at Millerston-road. Mr. J. Burns, architect, 7, Whirlie-road, Houston.

FORT WILLIAM.—POOL.—T.C. has decided to construct a swimming-pool at Achintore.

FIFESHIRE.—POLICE STATIONS.—C.C. to erect two new police stations, etc., at Springfield and Brookhill. Mr. G. Sandilands, architect, St. Catherine's-street, Cupar.

GLASGOW.—BUILDINGS.—Dean of Guild Court has passed the following plans: Textile Estates, to erect warehouse on a site at Wilson-street, Hutcheson-street and Brunswick-street; Mr. Thomas Rodger, Motherwell, to erect working-men's hostel on the site of Annfield Hall, Gallowgate.

HAMILTON.—BUILDINGS.—Plans to hand for reconstruction and heating installation for Hamilton Academy; estimated cost £3,500 to £4,000 Mr. J. Stewart, architect, Albion-street, Motherwell.

KIRKCALDY.—HOUSES.—T.C. approved plans for 332 houses, non-subsidy type, on the King Street site. Mr. W. Dow, architect.

KIRKINTILLOCH. — HOUSES. — T.C. to borrow £36,000 to defray cost of erecting 112 houses under the 1930 Act at Hillhead.

PORTOBELLO. — ADDITIONS. — Plans for hand for reconstruction and addition for the Co-operative Society, Ltd. Mr. F. Wood, architect, 75, George-street, Edinburgh.

RENFREWSHIRE. — BUILDINGS. — County Council have passed the following plans: W. S. Tarbet, 11, Bath-street, Gourock, to erect 58 five-apartment, and 4 four-apartment houses at Inverkip.

STIRLING.—BATHS.—T.C. to construct public swiming-baths.

## MANCHESTER AND SALFORD BUILDERS

Mr. W. Bosworth, President of the National Federation, speaking at the annual dinner of the Manchester, Salford and District Building Trades Employers' Association, said that the public need not look for any reduced costs from any method of mass-production. Builders were not going to have it; and scientists — though they had done wonderful things — could produce nothing better than bricks and mortar for a building job. As a result of construction on new-fangled ideas a year or two ago the countryside had been filled with "monstrosities." "Builders," he continued, "will not tolerate mass buying of materials, either. We have had experience of it. The imposition of such methods again to-day would be disastrous, and prices would soar."

# CURRENT PRICES FOR BUILDING WORK IN LONDON*

### EXCAVATOR.

| | | s. | d. |
|---|---|---|---|
| Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep | per yard cube | 8 | 0 |
| Add if in clay | ,, ,, | 1 | 0 |
| Add for every additional depth of 6 ft. | ,, ,, | 0 | 6 |
| Planking and strutting to trenches | per foot super | 0 | 3 |
| Do. to sides of excavation, including shoring | ,, ,, | 1 | 0 |

### CONCRETOR.

| | | | |
|---|---|---|---|
| Portland cement concrete in foundations 1 to 6 | per yard cube | 24 | 0 |
| Add if in underpinning in short lengths | ,, ,, | 5 | 0 |
| Add if in floors 6 in. thick | ,, ,, | 2 | 0 |
| Add if in beams | ,, ,, | 2 | 6 |
| Add if aggregate 1 : 2 : 4 | ,, ,, | 8 | 0 |
| Add for hoisting not exceeding 10 ft. beyond the first 10 ft. | ,, ,, | 1 | 6 |

### BRICKLAYER.

| | | £ | s. | d. |
|---|---|---|---|---|
| Reduced brickwork in lime mortar and Fletton bricks | per rod | 26 | 0 | 0 |
| Add if in stocks | ,, | 6 | 0 | 0 |
| Add if in Staffordshire blues | ,, | 22 | 0 | 0 |
| Add if in Portland cement and sand | ,, | 1 | 5 | 0 |

FACINGS.

| | | | |
|---|---|---|---|
| Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks | per ft. super | 0 | 0 | 1¼ |

POINTING.

| | | | |
|---|---|---|---|
| Neat flat struck or weathered joint | ,, ,, | 0 | 0 | 3 |

ARCHES.

| | | | | |
|---|---|---|---|---|
| Extra only to the price of ordinary brickwork :— | | | | |
| Fair external in half brick rings | ,, ,, | 0 | 0 | 10 |
| Axed in stocks | ,, ,, | 0 | 0 | 9 |
| Rubbed and gauged jointed in putty camber or segmental | ,, ,, | 0 | 5 | 9 |

SUNDRIES.

| | | | | |
|---|---|---|---|---|
| Damp course in double course of slates breaking joint and bedded in Portland cement | ,, ,, | 0 | 0 | 11 |
| Setting ordinary register grates and stoves | each | 1 | 0 | 0 |
| Setting kitchener, including forming flues, &c., with all necessary fire bricks | ,, | 4 | 15 | 0 |

### ASPHALTER.

| | | s. | d. |
|---|---|---|---|
| Half-inch horizontal damp course | per yard super | 4 | 6 |
| Three-quarter-inch vertical damp course | ,, ,, | 9 | 6 |
| Three-quarter-inch on flats in two thicknesses | ,, ,, | 6 | 0 |
| Angle fillet | per foot run | 0 | 3 |
| Skirting and fillet 6 in. high | ,, ,, | 1 | 0 |

### MASON.

| | | | |
|---|---|---|---|
| York stone templates fixed | per foot cube | 12 | 9 |
| York stone sills fixed | ,, ,, | 22 | 0 |
| Bath stone and all labour fixed | ,, ,, | 10 | 6 |
| Beer stone and all labour fixed | ,, ,, | 15 | 0 |
| Portland stone fixed | ,, ,, | 15 | 6 |
| Chilmark stone fixed complete | ,, ,, | 16 | 6 |

### SLATER.

| | | | |
|---|---|---|---|
| Welsh 16 in. × 8 in. 3 in. lap. including nails | per square | 70 | 0 |
| Do. 20 in. × 10 in. Do. Do. | ,, | 71 | 6 |
| Do. 24 in. × 12 in. Do. Do. | ,, | 73 | 6 |

### CARPENTER AND JOINER.

| | | | |
|---|---|---|---|
| Fir framed in plates | per foot cube | 3 | 6 |
| Do. joists | ,, ,, | 4 | 0 |
| Do. roofs, floors and partitions | ,, ,, | 4 | 6 |
| Do. trusses | ,, ,, | 6 | 9 |

| | ¾″ | 1″ | 1¼″ | 2″ |
|---|---|---|---|---|
| Deal rough close boarding per sq. | 30/- | 35/- | 43/- | 70/- |

| | | | |
|---|---|---|---|
| Flat centering for concrete floor, including struts or hangers | ,, | 50 | 0 |
| Do. to beams | per ft. sup. | 0 | 8 |
| Centre for arches | ,, | 1 | 6 |
| Gutter boards and bearers | ,, | 1 | 0 |

FLOORING.

| | ¾″ | 1″ | 1¼″ | 1½″ |
|---|---|---|---|---|
| Deal-edges shot per sq. | — | 38/- | 45/- | 52/- |
| Do. tongued and grooved ,, | — | 43/- | 50/- | 58/- |
| Do. matchings ,, | 40/- | 45/- | — | — |
| Moulded skirtings, including backings and grounds per ft. sup. | 1/4 | 1/7 | 1/9 | 2/3 |

SASHES AND FRAMES.

| | | | |
|---|---|---|---|
| One-and-a-half moulded sashes or casements | per foot super | 1 | 9 |
| Two Do. Do. Do. | ,, ,, | 2 | 0 |
| Add for fitting and fixing | ,, ,, | 0 | 2 |
| Deal cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights, average size | | 3 | 3 |

DOORS.

| | 1½″ | 1¾″ | 2″ |
|---|---|---|---|
| Two-panel square framed per ft. sup. | 2/1 | 2/3 | 2/5 |
| Four-panel Do. ,, | 2/4 | 2/6 | 2/9 |
| Two-panel moulded both sides ,, | 2/6 | 2/9 | 2/11 |
| Four-panel Do. Do. ,, | 2/9 | 2/11 | 3/2 |

### CARPENTER AND JOINER—continued.

FRAMES.

| | | s. | d. |
|---|---|---|---|
| Deal wrot moulded and rebated | per foot cube | 12 | 0 |

| | 1″ | 1¼″ | 1½″ |
|---|---|---|---|
| Plain deal jamb linings framed per ft. sup. | 1/7 | 1/8 | 1/11 |
| Deal shelves and bearers ,, | 1/2 | 1/4 | 1/7 |
| Add if cross-tongued ,, | 2d. | 2d. | 2d. |

STAIRCASES.

| | 1″ | 1¼″ | 1½″ | 2″ | 2½″ |
|---|---|---|---|---|---|
| Deal treads and risers in and including rough brackets | 2/0 | 2/3 | 2/8 | — | — |
| Deal strings wrot on both sides and framed | 1/8 | 2/- | 2/2 | 2/8 | — |

| | | | |
|---|---|---|---|
| Housings for steps and risers | each | 0 | 11 |
| Deal balusters, 1 in. x 1½ in. | per ft. run | 0 | 9 |
| Mahogany handrail, average 3 in. x 3 in. | ,, ,, | 5 | 6 |
| Add if ramped | ,, ,, | 11 | 0 |
| Add if wreathed | ,, ,, | 22 | 0 |

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

| | | | |
|---|---|---|---|
| 6 in. barrel bolts | 8½d. | Rim locks | 2/- |
| Sash fasteners | 11½d. | Mortice locks | 4/6 |
| Casement fasteners | 1/5 | Patent spring hinges and letting into floor and making good | 19/- |
| Casement stays | 1/2 | | |
| Cupboard locks | 1/5 | | |

### FOUNDER AND SMITH.

| | | s. | d. |
|---|---|---|---|
| Rolled steel joists | per cwt. | 15 | 0 |
| Plain compound girders | ,, | 18 | 0 |
| Do. stanchions | ,, | 20 | 9 |
| In roofwork | ,, | 26 | 6 |

### RAIN-WATER GOODS.

| | 3″ | 4″ | 5″ | 6″ |
|---|---|---|---|---|
| Half-round plain rebated joints ft. run | 1/- | 1/1 | 1/3 | 1/6 |
| Ogee Do. Do. ,, | 1/2 | 1/3 | 1/9 | 2/3 |
| Rain-water pipes with ears ,, | 1/3 | 1/10 | — | — |
| Extra for shoes and bends each | 2/9 | 3/11 | — | — |
| Do. stopped ends ,, | 1/1 | 1/4 | 1/9 | 2/6 |
| Do. nozzles for inlets ,, | 2/2 | 2/7 | 3/7 | 4/- |

### PLUMBER.

| | | s. | d. |
|---|---|---|---|
| Milled lead and laying in flashings and gutters | per cwt. | 32 | 0 |
| Do. do. flats | ,, | 31 | 0 |
| Extra labour and solder in coated cesspools | each | 6 | 0 |
| Welt joint | per ft. run | 0 | 4 |
| Soldered seam | ,, ,, | 1 | 2 |
| Copper nailing | ,, ,, | 0 | 3 |

| | ½″ | ¾″ | 1″ | 1½″ | 2″ | 4″ |
|---|---|---|---|---|---|---|
| Drawn lead waste per ft. run | 10½ | 1/2 | 1/5 | 2/1 | 2/5 | — |
| Do. service... ,, | 1/1 | 1/6 | 1/9 | 2/8 | — | — |
| Do. soil ..... ,, | — | — | — | — | — | 5/- |
| Bends in lead pipe each | — | — | — | — | 2/- | 5/6 |
| Soldered stop ends ,, | 0/7 | 0/11 | 1/3 | 2/- | 2/6 | — |
| Red lead joints ,, | 0/9 | 0/10 | 1/1 | 1/7 | 1/10 | 3/6 |
| Wiped soldered joints ,, | 2/- | 2/6 | 2/9 | 3/5 | 4/3 | 6/- |
| Lead traps and cleaning screws ,, | — | — | — | 10/- | 13/- | — |
| Bib cocks and joints ,, | 6/- | 9/- | 13/- | — | — | — |
| Stop cocks and joints ,, | 10/6 | 12/6 | 17/6 | 50/- | — | — |

### PLASTERER.

| | | s. | d. |
|---|---|---|---|
| Render, float and set in lime and hair | per yard sup. | 2 | 0 |
| Do. Do. Sirapite | ,, ,, | 2 | 3 |
| Do. Do. Keen's | ,, ,, | 3 | 0 |
| Add saw lathing | ,, ,, | 1 | 4 |
| Add metal lathing | ,, ,, | 2 | 4 |
| (Not including hangers or runners, etc., for suspended ceilings.) | | | |
| Portland cement screed | ,, ,, | 1 | 7 |
| Do. plain face | ,, ,, | 3 | 3 |
| Mouldings in plaster | per 1 girth | 0 | 1½ |
| One-and-a-half granolithic pavings | per yard sup. | 4 | 6 |

### GLAZIER.

| | | | |
|---|---|---|---|
| 21-oz. sheet plain | per foot sup. | 0 | 6½ |
| 26-oz. Do. | ,, ,, | 0 | 7¾ |
| Obscured sheet | ,, ,, | 0 | 8 |
| ⅛-in. rolled plate | ,, ,, | 0 | 9 |
| ¼-in. rough rolled or cast plate | ,, ,, | 0 | 10 |
| ¼-in. wired cast plate | ,, ,, | 1 | 1 |

### PAINTER.

| | | | |
|---|---|---|---|
| Preparing and distempering, 2 coats | per yard sup. | 0 | 7½ |
| Knotting and priming | ,, ,, | 0 | 7 |
| Plain painting, 1 coat | ,, ,, | 0 | 9 |
| Do. 2 coats | ,, ,, | 1 | 2 |
| Do. 3 coats | ,, ,, | 1 | 9 |
| Do. 4 coats | ,, ,, | 2 | 4 |
| Graining | ,, ,, | 2 | 3 |
| Varnishing twice | ,, ,, | 1 | 9 |
| Sizing | ,, ,, | 0 | 3 |
| Flatting | ,, ,, | 0 | 7 |
| Enamel | ,, ,, | 1 | 1 |
| Wax polishing | per foot sup. | 0 | 6 |
| French polishing | ,, ,, | 1 | 2 |
| Preparing for and hanging paper | per piece 2/- to | 4/- | |

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Act, and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

# TRADE NEWS

### "The Reflector."

This is the title of the well-produced house journal of the Benjamin Electric, Ltd. Brightly edited, a large number of illustrations of buildings in which Benjamin lighting plant is incorporated find place. Copies are obtainable from Brantwood Works, Tariff-road, N.17.

### The Science of Light.

Holophane, Ltd., have issued a valuable little booklet containing revised illuminating engineering data. Illustrated fully with diagrams, this should be of considerable use to those interested in lighting. A copy will be sent from Elverton-Street, Vincent-square, S.W.1, on mentioning this journal.

### White Lead.

White Lead Publicity Bureau have issued from Rex House, 38, King William-street, London, E.C.4, a broadsheet for 1935, which has been circulated to the building and decorating trades throughout the country with the object of drawing the attention of these trades to the lasting protection given by white lead paints. We learn that the number of builders and decorators who applied for advertising matter last year showed a great increase over the previous year, and the amount of material supplied was a record.

### Tile Manufacturers' Group.

The Silverdale Tileries has been disposed of to the United Tile Manufacturers, Ltd., a public company, which has been formed to acquire a group of well-known tileries in the Midlands. Mr. Leslie S. Tomlinson is continuing to manage the business for the company until they take possession, about Easter, when he will leave the works. Mr. Tomlinson's associated firm, Messrs. Wheatly and Co., are not affected by the change, except that in future there will be no connection between the two works. He will continue to act as a partner in Messrs. Wheatly and Co.

### A Brick Chimney Contract.

Messrs. P. C. Richardson and Co. (Middlesbrough), Ltd., have secured the contract for the second brick chimney at Hams Hall Power Station, Coleshill, near Birmingham, for the City of Birmingham Electric Supply Dept. The architects are Messrs. Ewen Harper, Brother and Co., Corporation-street, Birmingham. Both chimneys will be 351 ft. high, with internal diameters of 20 ft., and will be, it is stated, the largest twin chimneys in the British Isles. Both are built with acid-resisting bricks throughout. This firm have also just completed a 350 ft. by 15 ft. chimney for the same department at their Nechells Power Station, Birmingham.

### An Automatic Solid Fuel Stoker.

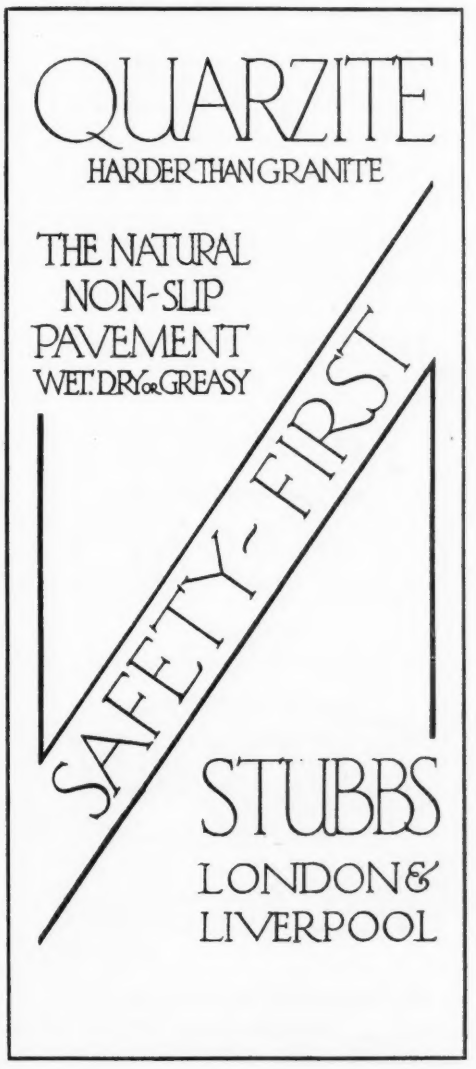
Messrs. Ashwell and Nesbit, Ltd., have issued a catalogue giving details of the "Iron Fireman" automatic solid fuel stoker. This machine is designed to effect economies by displacing fuel-oil, coke and other types of fuel with cheap British coal. At the same time, more evaporation is claimed for the stoker where it is a steam boiler and more heat where it is a heating plant, together with uniform pressures and temperatures, with the saving of 90 per cent. of the previous manual labour. These brief facts are amplified in the brochure, which will be sent upon application to Barkby-lane, Leicester.

### A New Paver Mixer.

A new paver mixer has been designed by Messrs. Frederick Parker, Ltd., Viaduct Works, Leicester, for an important concern in the Near East. This mixer travels on a caterpillar track, enabling the machine to traverse soft and sandy surfaces, which is particularly desirable in certain overseas markets. The machine is self-propelling, and can travel in forward and backward directions at two speeds, approximately 1½ and ¾ mile per hour. The mixer is equipped with a power loader to raise the material from ground level to the mixing drum. The mixer is Parker's open-drum tilting type, fed by the power loader. Its rated capacity is 10 cu. ft. of unmixed material per batch or 7 cu. ft. mixed material per batch, and it is capable of dealing with approximately 70/90 cu. yd. per eight-hour day, under normal conditions. Over the mixing drum an automatic measuring water tank is provided. The plant is driven by a "Petter" oil engine of 10 h.p., which is equipped with radiator cooling system.

### A New Rendered Finish.

The simplification of design of modern buildings has necessarily created the need for imparting colour and texture to external walls to balance formal severity. White and coloured cement renderings have provided the architect with excellent decorative media, and have demonstrated their applicability to all forms of structure, from small domestic work to large public buildings. An outstanding merit is their adaptability to an endless variety of effects; they may be finished with smooth matt, or rough surfaces. New textural finishes are constantly being evolved, and one of the most popular of the recent introductions is the "scraped finish"—the subject of a booklet just issued by the Cement Marketing Co., Ltd. This texture is slightly rougher than the wood float finish, and has sufficient inequality of surface to introduce lights and shadows, thus giving it character. It possesses important advantages in that it shows no sign of crazing, it weathers evenly, its does not show the semi-circular float marks which are sometimes seen in a wood float finish, and, in addition, it does not show breaks where the work of one day follows on that of the previous day—a feature of considerable importance where large flank walls are being treated. The booklet, which describes in detail the different processes for producing this texture, will be sent, free of charge, to any who may be interested. A feature is the beautifully reproduced illustrations in colour, which give a faithful representation of the style of finish obtainable.




# NEWS ITEMS

### Builders' Foremen and Clerks of Works.

At the last meeting of the London Association of Builders' Foremen and Clerks of Works a resolution was passed to the effect that a fitting celebration of the Royal Jubilee would be the launching of a scheme for the alleviation of unemployment, and to this end it is suggested that the immediate renovation of large London buildings be put in hand.

### Bridge Work, Argentina.

The Commercial Counsellor to H.M. Embassy at Buenos Aires reports that the Argentine State Railways Administration is calling for tenders, to be presented in Buenos Aires by April 22, for the supply of six steel bridge spans for railway bridges. Firms desirous of offering steel bridge spans of United Kingdom manufacture can obtain the further details of this call for tenders, together with particulars of the "Special Register" service of information, upon application to the Department of Overseas Trade, 35, Old Queen-street, London, S.W.1. Reference number G.Y. 14969 should be quoted.

### Heating and Ventilating Employers

The National Association of Heating, Ventilating and Domestic Engineering Employers elected Mr. J. L. Musgrave to the presidential chair at their annual general meeting, held at the Hotel Russell, on March 13.

In his presidential speech, Mr. Musgrave emphasised the importance of bringing the public to believe that heating does not of necessity imply a stuffy atmosphere. He stressed the need for buildings being sufficiently warmed that they may be adequately ventilated, to assist in combating disease germs. He put in a vigorous plea for the principle of co-operation between architects, builders, and sub-contractors, to achieve the highest efficiency of production.

---

### CHELMSFORD CIVIC CENTRE.

The general contractors for this work, described on page 597, were Messrs. Ashford Builders' Co., Ltd., and the following firms were associated with the work:—J. and R. Howie, Ltd., Kilmarnock, sanitary fittings, obtained through Brown and Son, Ltd., Chelmsford; J. McCall (Sheffield), Ltd., reinforced concrete work, reinforcement; Ashford Builders' Co., Ltd., contractor for same; Dorman, Long and Co., Ltd., steelwork; W. Richardson and Co., Ltd., heating and ventilating; Vigers Bros., Ltd., wood block flooring; Crittalls Manufacturing Co., Ltd., roof lights and glazing; Allied Guilds, Ltd., Birmingham, fibrous plaster work; Rea Metal Casement Co., Ltd., Liverpool, steel windows; Essex Electric Installation Co., Ltd., Chelmsford, electric light wiring; General Electric Co., electric fittings; Gillett and Johnston, Ltd., Croydon, electric clocks; Milners' Safe Co., Ltd., Liverpool, steel library fittings; North of England School Furnishing Co., wood library fittings; N. F. Ramsay and Co., Ltd., hardware; Val de Travers Asphalte Paving Co., Ltd., vertical damp-proof course; Vulcanite, Ltd., asphalt to flat roofs; Kleine Co., Ltd., "Duromit" iron-slip finish to main stairs—to first floor and basement; H. H. Martyn and Co., Ltd., Cheltenham, bronze bulustrade to main staircase; Brown and Sons, Ltd., Chelmsford, fireplaces; Milners' Safe Co., Ltd., Liverpool, strong room door; Williams and Williams, Ltd., Chester, ceiling lights; H. H. Martyn and Co., Ltd., Cheltenham, bronze screens, doors and radiator grilles in entrance hall; Bath and Portland Stone Firms, Ltd., Bath, Portland stone; Pickerings, Ltd., lifts; John P. White and Sons, Ltd., Bedford, wood panelling in committee room; R. A. Lister and Co., Ltd., Dursley, electric pump in heating chamber; E. J. and A. T. Bradford, stone carving; A. and O. Stefanutti and Co., Ltd., terrazzo work; W. T. Wright and Co., Ltd., Loughborough, facing bricks.

The clerk of works was Mr. E. Perrow.

# TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modifications.*
¶ Denotes *accepted by H.M. Government Departments.*

**Annfield Plain.**—Pithead baths at Morrison Colliery, near Annfield Plain, Co. Durham, for the Miners' Welfare Committee, Romney House, Marsham-street, Westminster, S.W.1. Mr. J. H. Forshaw, architect:—

*Henderson Bros., Smith-street, South Shields.

**Ashbourne.**—For reconstruction of Hanging bridge, Mayfield, including demolition of part of existing bridge, construction in masonry-faced reinforced concrete of bridge over River Dove (span 60 ft.), flood channel bridge (3 spans of 28 ft.) and Mill Stream Bridge (span 17 ft.), each having width between parapets of 45 ft.; also reconstruction of road approaches (700 lin. yds.), with retaining walls and ancillary works, for the Staffordshire C.C. Mr. R. S. Murt, County Surveyor, County-buildings, Stafford.

*T. Percy Trentham, Ltd., Birmingham ..... £25,084

**Atherstone.**—Rebuilding scheme for Wilson & Stafford, Ltd., Britannia Works. Mr. H. N. Jepson, architect, Midland Bank-chambers, Newdegate-place, Nuneaton:—

*G. E. & W. Wincott, Nuneaton.

**Barnsley.**—Extensions at the Littleworth-lane schools, for the E.C. Messrs. Dyson, Cawthorne & Coles, architects, Regent-street:—

*Wm. Johnson & Sons (Wombwell), Ltd.

**Becontree.**—159 houses and flats (normal type) at Barking (No. 17) section, for the L.C.C.:—

| | | | |
|---|---|---|---|
| C. Miskin & Sons, Ltd., St. Albans | £68,750 | 0 | 0 |
| Anglo-Scottish Construction Co., Ltd., Westminster | 61,120 | 0 | 0 |
| Leslie & Co., Ltd., Kensington | 60,016 | 0 | 0 |
| W. H. Gaze & Sons, Ltd., Kingston | 59,873 | 0 | 0 |
| Rowley Bros., Ltd., Tottenham | 59,641 | 0 | 0 |
| R. J. Rowley, Ltd., Tottenham | 59,193 | 0 | 0 |
| Corolite Construction, Ltd., Hendon | 58,514 | 0 | 0 |
| Unit Construction Co., Ltd., Robert-street, W.C. | 58,011 | 0 | 0 |
| Pavitt Bros., Ltd., Purfleet | 56,803 | 10 | 5 |
| A. T. Rowley (London), Ltd., Tottenham | 56,177 | 0 | 0 |
| Sir Lindsay Parkinson & Co., Ltd., Shaftesbury-avenue, W.C. | 55,581 | 0 | 0 |
| Holland & Hannen and Cubitts, Ltd., Westminster | 55,109 | 10 | 0 |
| *Henry Boot & Sons, Ltd., 10, The Boltons, S.W.10 (after correction) | 53,505 | 0 | 4 |

(Architect's estimate: £57,270.)

**Becontree.**—For 36 houses (larger type) at Barking (No. 17) section, for the L.C.C.:—

| | |
|---|---|
| C. Miskin & Sons, Ltd., St. Albans | £26,888 |
| Anglo-Scottish Construction Co., Ltd., Westminster | 25,182 |
| Corolite Construction Co., Ltd., Hendon | 21,276 |
| Sir Lindsay Parkinson & Co., Ltd., Shaftesbury-avenue, W.C. | 20,930 |
| Henry Boot & Sons, Ltd., South Kensington | 20,827 |
| Pavitt Bros., Ltd., Purfleet | 20,663 |
| A. T. Rowley (London), Ltd., Tottenham | 20,445 |
| Holland & Hannen and Cubitts, Ltd., Westminster | 20,327 |
| Leslie & Co., Ltd., Kensington | 19,595 |
| W. H. Gaze & Sons, Ltd., Kingston | 19,566 |
| Rowley Bros., Ltd., Tottenham (after correction) | 19,513 |
| *R. J. Rowley, Ltd., Belmont-avenue, Tottenham, N.17 | 19,459 |
| Unit Construction Co., Ltd., Robert-street, W.C. (qualified) | 19,182 |

(Architect's estimate: £21,931.)

**Bicester.**—46 houses to be built under the 1930 housing act, for the U.D.C.:—

*C. Parker, Marsh Gibbon ..... £13,020

**Bo'ness.**—Housing scheme at No. 3 site at Corbiehall, for the T.C. Mr. William Battie, Burgh Architect and Surveyor:—

*Excavation, brick and mason* — *Ramsay Brothers, Laurieston.
*Slater work and rough casting*—*R. Fraser, Gowanlee, Polmont, near Falkirk.
*Joinery, carpentry and ironmongery*—*G. Downie and Sons, Bo'ness.
*Painter*—*J. Campbell, Grangepans.
*Plumber work and sanitary fitments*—*J. Dymnock & Sons, Bo'ness.
*Iron railings, gates and fencing*—*A. Mowatt, Windygates.
*Plaster*—*James Begg & Sons, Bo'ness.

**Bradford.**—Alterations to the premises of Rington's Tea Co. Messrs. Stephenson & Gillis, architects, Saville-place, Newcastle-on-Tyne:—

***Kitching & Hodgson, Carlisle-road, Manningham, Bradford.**

**Burton-on-Trent.**—Schools at Clarence-street, for the T.C.:—

*G. Hodges & Son, Burton ..... £23,000

**Carluke.**—New police station and police houses, for Lanarkshire C.C. Mr. J. Stewart, architect, Motherwell:—

| | | | |
|---|---|---|---|
| *Excavation, brick and mason work*— | | | |
| *J. Logan & Sons, Carluke | £1,748 | 0 | 0 |
| *Joinery, carpentry and ironmongery work*— | | | |
| *Forrest & Agnew, Carluke | 1,346 | 1 | 0 |
| *Glazier work, etc.*— | | | |
| *Baillie & Telfer, Glasgow | 41 | 10 | 5 |
| *Steel casement sashes*— | | | |
| *The Crittall Manufacturing Co., Ltd., Glasgow | 294 | 12 | 7 |
| *Plumber work and sanitary fittings, etc.*— | | | |
| W. A. Dunlop & Sons, Lanark | 523 | 19 | 5 |
| *Plaster and cement work, etc.*— | | | |
| *W. Russell & Son, Carluke | 594 | 1 | 9 |
| *Slater and roughcasting works, etc.*— | | | |
| *S. Holmes, Rutherglen | 417 | 15 | 1 |
| *Electrical installation and fittings*— | | | |
| *J. Marshall, Carluke | 96 | 5 | 9 |

**Chester.**—For 228 houses on the Lache estate, for the T.C.:—

*M. J. Gleeson, Ltd., Sheffield ..... £71,806

**Chester.**—For alterations to building to form junior institute centre, for the T.C.:—

*G. Pritchard, Chester ..... £953

**Chester.**—For fencing playgrounds, for the T.C.:—

*Thos. Blackburn & Sons, Preston ..... £329

**Chesterfield.**—Erection of elementary school at Frecheville Beighton, near Chesterfield, for the Derbyshire E.C. Mr. G. H. Widdows, F.R.I.B.A., County Architect, St. Mary's Gate:—

*Henfrey, Ltd., Mansfield.

(Estimated cost, £10,670.)

**Chichester.**—Residence at Dell Quay, for Mr. A. E. K. Cull. Mr. Ernest Emerson, A.R.I.B.A., architect:—

*T. Couzens & Sons, Ltd.

**Clayton-le-Moors.**—For erection of 18 houses at Oakenshaw, for U.D.C. Mr. A. Dodgeon, Surveyor, Council Offices:—

*R. W. Myers, Great Harwood ..... £5,190

**Clowne.**—For erection of 24 houses at Barlestone Moor, for R.D.C. Mr. W. J. Gallagher, Surveyor:—

*Direct labour.

**Coventry.**—Additions to King Henry VIII School, for Board of Governors. Mr. H. W. Chattaway, architect, Trinity Churchyard:—

*H. Clarke & Sons, Ltd., Coventry.
(Estimated cost, £10,000.)

**Darlington.**—For alterations to Messrs. Town Tailors, Ltd., premises at 114-120, Northgate:—

*T. Horseman & Co., Ltd., Leeds.

**Dublin.**—Erection of three branch libraries at Drumcondra, Inchicore, and Ringsend, for the T.C.:—

*H. & J. Martin, Ltd. ..... £13,365

**East Elloe.**—24 houses in Railway-lane, Sutton Bridge, for the R.D.C.:—

*J. T. Merryweather ..... £7,000

DON'T TENDER UNSUCCESSFULLY

SECURE CONTRACTS WITH

BEITH & SKEAF

THE STEEL SCAFFOLDING CO., LTD.

80, Regent Street, London, W.1.

Telephone: Regent 1157

**Edgware.**—For relaying the maple floor at Redhill Institution, for the Middlesex C.C.:—

*J. McKenzie, Ltd., Hendon ..... £175

**Ennis.**—Repairs and painting to houses, for the U.D.C.:—

| | |
|---|---|
| John Keane | £468 10 |
| *H. Blake | 464 10 |

**Glasgow.**—New Episcopal Church of St. Barnabas at Craigpark-drive. Messrs. Whyte & Galloway, architects, 121, Bath Street, Glasgow:—

*Excavation, brick and mason works, etc.*—*Cooper & Co., Glasgow.
*Joinery, carpentry and ironmongery work, etc.*—*Lawson & Co. (Govan), Ltd., Govan.
*Plumber work and sanitary fittings, etc.*—*W. Anderson (Glasgow), Ltd., Glasgow.
*Heating engineering installation, etc.*—*Taylor & Fraser, Glasgow.
*Slater work, etc.*—*C. Wilson, Glasgow.
*Steel construction work, etc.*—*Redpath, Brown & Co., Glasgow.
*Plumber work and sanitary engineering*—*J. Paterson (Plumber) & Co., Glasgow.
*Plaster work, etc.* — *W. Tonner (Glasgow), Ltd., Glasgow.

**Greenwich.**—For boundary railing at Charlton Park, for B.C.:—

*Bayliss, Jones and Bayliss, E.C.4 ..... £153

**Greenwich.**—For redecoration of (*a*) welfare centre, Shooter's Hill-road, (*b*) redecoration, and (*c*) electric lighting, wiring, at maternity home, 78-80, Shooter's Hill-road, Blackheath, for B.C.:—

| | | | |
|---|---|---|---|
| (*a*)—*Borough Engineer's Dept. | £147 | 0 | |
| (*b*)—*Borough Engineer's Dept. | 163 | 0 | |
| (*c*)—*Keating & Miskin, Ltd. | 152 | 6 | |

**Guildford.**—For works at new senior boys' school at Stoughton, for the E.C.:—

| | | | |
|---|---|---|---|
| Heating installation— | | | |
| *Tily & Brown | £560 | 0 | 0 |
| Electric lighting installation— | | | |
| *Bowden & Higlett, Ltd. | 313 | 12 | 6 |

**Haslingden.**—Provision of a swimming bath, providing for swimming pool 75 ft. by 30 ft., slipper baths, etc., for the T.C. Mr. R. Taylor, surveyor, Municipal Offices:—

*Builders*—*Clegg Bros. (Burnley), Ltd., Burnley.
*Reinforced concrete*—*Bolton & Hayes, Ltd., Bolton.
*Steelwork*—*Fleming Bros., Glasgow.
*Joiner*—*B. Constantine, Ltd.
*Plumber*—*W. F. Thacker.
*Slater*—*H. H. Tomlinson.
*Plasterer*—*J. C. Waite.
*Electrician*—*J. A. Dobson.
*Filtration*—*Bell Bros. (Manchester), Ltd., Denton.
*Painters*—*A. Hamer & Sons.
*Heating, etc.*—*W. F. Thacker.
(Remainder of Haslingden.) (Cost, £14,250.)

**Huddersfield.**—For erection of new vicarage, Crosland Moor, for Parochial Church Council. Messrs. Abbey & Hanson, architects and surveyors, 11, Cloth Hall-street:—

*Mason*—*J. Wimpenny & Co.
*Carpenters and joiners*—*A. E. Cooper & Son.
*Plasterers and slaters*—*T. B. Tunnacliffe.
*Plumbers and electricians*—*E. Rayner.
*Concreters*—*E. H. White.
*Painters*—*Joe Kaye.
(All of Huddersfield.)

**Huntingdon.**—Cubicle block and extensions to administrative block at isolation hospital, for the Board. Mr. W. A. Lea, F.R.I.B.A., architect, 4, Market-hill:—

| | |
|---|---|
| W. Noakes & Son, Ltd., Thrapston | £3,905 |
| Pearson & Blackwell, Doncaster | 3,701 |
| M. J. Allen & Sons, Ltd., Brampton | 3,587 |
| Pettits, Ltd., Ramsey | 3,563 |
| *F. B. Thackray & Co., Ltd., Huntingdon | 3,475 |

**Hyde.**—New vicarage in Edna-street, for the vicar, Rev. E. Victor Dawson, B.A., and Parochial Council of St. George's Church. Mr. G. Clayton, architect, 4, Wellington-street, Stockport:—

‡W. Norgrove & Son, Ltd., Hyde.
(Estimated cost £1,600.)

**Hythe.**—Alterations to Town Hall convenience, for the T.C.:—

*J. Gradden & Son ..... £112

**Islington.**—For the erection of five-story block of 36 dwellings at Ring Cross Estate (Hope-street area), for the L.C.C. Architect, County Hall, S.E.:—

| | |
|---|---|
| J. W. Trudgett, Colchester | £19,806 |
| F. R. Hipperson & Son, Ltd., Finsbury | 15,881 |
| George Parker & Sons, Ltd., Peckham | 15,750 |
| C. Miskin & Sons, Ltd., St. Albans | 15,406 |
| William Moss & Sons, Ltd., Cricklewood | 15,325 |
| Patman & Fotheringham, Ltd., Islington | 15,287 |
| Harry Neal, Ltd., St. Marylebone (Qualified as to rates and prices.) | 15,203 |
| Truett & Steel, Ltd., Thornton Heath | 15,194 |
| Commercial Structures, Ltd., Islington | 15,166 |
| W. H. Gaze & Sons, Ltd., Kingston | 14,983 |
| Speirs, Ltd., Westminster | 14,763 |
| A. T. Rowley (London), Ltd., Tottenham | 14,542 |
| *Rowley Bros., Ltd., Tower Works, Dunloe-avenue, Tottenham, N.17 | 14,394 |

(Architect's comparable estimate: £13,984.)

**Leeds.**—For alterations and additions at the "Wellington Hotel," Hunslet, for Tetley & Sons, Ltd., Hunslet-rd. Messrs. Kitson, Parish, Ledgard & Pyman, architects, Lloyds Bank-chambers, Vicar-lane:—

*J. & H. Furness.

**Leeds.**—For alterations and additions at Harewood Barracks, Woodhouse-lane, for War Office, Territorial Dept.:—

*Collins & Murray, Ltd.

**Leicester.**—250 houses at Braunstone, for the T.C. Mr. J. S. Fyfe, A.R.I.B.A., Housing Architect, Wyggeston House, 18, Highcross-street:—

*Simms, Son & Cooke, Ltd., Nottingham.

**Leyland.**—Sunday school and hall in Leyland-lane, for the Methodist Chapel Trustees. Messrs. Foden, Hemm & Williams, L. & A.R.I.B.A., architects, Century-buildings, 199, Deansgate, Manchester:—

*Steelwork*—*Banister, Walton & Co., Ltd., Manchester.
*Joiners*—*Edwin Tomlinson & Son.
*Plumbers*—*Cocker Bros.
*Plasterer*—*T. Heyes.
*Heating*—*Craig & Mills, Ltd., Manchester.
*Lighting*—*W. B. Morris & Sons, Preston.
*Roofing*—*Ruberoid Roofing Co., Ltd., Manchester.
*Patent flooring* — *Duranbrite Flooring Co., Ltd., London, W.C.2.
*Reinforcement*—*British Reinforced Concrete Co., Ltd., Manchester.

(Remainder of Leyland.)

**Littlehampton.**—Residence at St. Winefride's-road, for Mr. F. C. Caffyn. Mr. H. Sherwood, L.R.I.B.A., architect, East Ashling, Chichester:—

*T. Couzens & Sons, Ltd.

**¶London.**—Following is a list of the contracts entered into by H.M.O.W. for week ending March 21:—

Cabinets, filing, steel vertical, foolscap—The Art Metal Construction Co., 199-203, Buckingham Palace-road, S.W.1, and G. A. Harvey & Co (London), Ltd., Woolwich-road, S.E.7
Window decorations, Silver Jubilee—W. Whiteley, Ltd., Queen's-road, Bayswater, W.
Ealing Telephone Exchange—heating and hot water service—Heath & Co., 28, Bath-road, Chiswick, W.4.
Customs and Excise Department, South Dock, South Quay, West India Docks—new offices—W. Harbrow, Ltd., 214, Rotherhithe New-road, S.E.16.
Sidcup Sorting Office—erection—L. T. Buckley, Dorland House, 14, Lower Regent-street, S.W.1.
Cardiff Welsh Board of Health Building—foundation work—F. J. Thomas & Sons, Ltd., Pearl-street, Cardiff.
Cupboards, steel—Sankey-Sheldon (Harris & Sheldon, Ltd.), 46, Cannon-street, E.C.4, and Milner's Safe Co., Ltd., 12-13, Newgate-street, E.C.1.
Tables, writing, 5 ft. by 3 ft.—R. Palmer & Co., Jubilee Works, Wilder-street, Bristol.
Carpet, Wilton—The Childema Carpet Co., Ltd., Kidderminster.
Carpet, Brussels—Carpet Trades, Ltd., Mill-street, Kidderminster.
Window aprons—J. Edgington & Co., Ltd., Sardinia House, Kingsway, W.C.2.
Venetian banners—W. Whiteley, Ltd., Queen's-road, Bayswater, W.
Bath District—ordinary works and repairs—J. Long & Sons, Ltd., Railway-road, Bath.
Silver Jubilee Celebrations—Venetian masts—J. Mowlem & Co., Ltd., 91, Ebury Bridge-road, S.W.1.
Grouped flags—J. Edgington & Co., Ltd., Sardinia House, W.C.2.
Chamois leathers—Porter Bros., Ltd., King's Dock Mill, Liverpool.

**¶London.**—The following works contracts have been placed by the War Office during the week ended March 21:—

Netley—alterations to quarters—F. G. Lambert, Totton.
Aldershot — regimental institute — W. Laughton Bedford.
Bramley—office building—W. Laughton, Bedford.
Shorncliffe—dining-room—G. Lewis & Sons (Dover) Ltd., Dover.
Fort George—regimental institute—W. and J. R. Watson, Ltd., Edinburgh.

**London (Paddington).**—For adapting and redecorating No. 414, Harrow-road, W., for a receiving office, for the M.W.B.:—

| | |
|---|---|
| F. Sage & Co., Ltd. | £2,140 |
| Sims & Sims | 1,644 |
| Mullen & Lumsden, Ltd. | 1,565 |
| Thomas & Edge, Ltd. | 1,520 |
| F. W. Dean | 1,397 |
| Arbro, Ltd. | 1,325 |
| W. Loweth & Sons, Ltd. | 1,198 |
| James Webb & Son (Builders), Ltd. | 1,082 |
| *W. T. Lawrence & Son | 1,063 |

**Macclesfield.**—For erection of 34 houses on Moss-lane estate, for the T.C. Mr. E. Hampson, Borough Surveyor, Town Hall:—

*M. J. Gleeson, Ltd., Sheffield ..... £9,602

**Maidenhead.**—Residence at Pinkneys Green, for Mr. D. H. G. Mosenthal. Mr. Harry Osborn, F.F.A.S., architect, 45, North-street, Chichester:—

*Jones & Sons, Maidenhead.

**Manchester.**—For the erection of the Friends' Insurance Company's premises:—

*J. Gerrard & Sons, Ltd., Swinton.

**Manchester.**—For the erection of the new police headquarters, for the Corporation. Mr. G. Noel Hill, A.R.I.B.A., City Architect:—

*J. Gerrard & Sons, Ltd., Swinton.

**Manchester.**—Alterations and additions to Bank Spring-gardens, Fountain-street, Marble-street and Phœnix-street, for District Bank, Ltd. Messrs. Francis Jones & H. A. Dalrymple, F. & A.R.I.B.A., architects, 178, Oxford-road:—

*Russell Building & Contracting Co., Ltd., Manchester.

**Meathop.**—Extensions to buildings, for the Governors of the Westmorland Sanatorium. Plans by Mr. J. Hutton, L.R.I.B.A., 22, High-street, Kendal:—

*J. O. Thoms, Lancaster.

**Meltham.**—Large residence, for the Director of United Thread Mills, Ltd. Messrs. Abbey & Hanson, architects and surveyors, 11, Cloth Hall-street:—

*Masons*—*T. Bottomley & Son.
*Carpenters and joiners*—*W. E. Holdroyd & Sons.
*Plasterers*—*W. E. Jowitt.
*Slaters*—*T. B. Tunnacliffe.
*Plumbers*—*Kaye & Bradley, Meltham.
*Electricians*—*F. Platt.
*Concreters*—*J. Wimpenny & Co.
*Painters*—*John Preston & Sons, Meltham.

(Remainder of Huddersfield.)

**Merthyr Tydfil.**—For alterations to Queen's-road school, for the E.C.:—

*Enoch Williams & Son, Dowlais ..... £739

**Merthyr Tydfil.**—For alterations to Gellifaelog school, for the E.C.:—

*Enoch Williams & Son, Dowlais ..... £1,226

**Merthyr Tydfil.**—For additional rooms at Georgetown school, for the E.C.:—

Humphreys, Ltd., London ..... £3,735
*Enoch Williams & Son, Dowlais ..... 2,651

**Middleton.**—Electricity showrooms and offices in Mill-street, for the Electricity Commissioners. Mr. J. Pollard, A.R.I.B.A., Borough Architect, Town Hall:—

‡R. Partington & Son, Middleton.

(Estimated cost: £8,000.)

**Muswell Hill.**—For repairs, etc., at 55, Tetherdown, for the Middlesex C.C.:—

*Frampton & Palmer ..... £147

**Nantwich.**—Reconstruction of Methodist Church, Hospital-street, for the Methodist Church Building Committee. Messrs. A. Brocklehurst & Co., F.R.I.B.A., architects, Martins Bank-buildings, Norfolk-street, Manchester:—

*J. Mayer, Son & Co., Chester.

**(Estimated cost: £3,000.)**


**Remove ingrained dirt with "MANGER'S"**

**Any paint in good condition can be cleaned of even ingrained dirt without any harm if the roughly correct quantity of "MANGER'S" be applied as simple directions.**

**Labour costs considerably reduced. 16 to 32 pints of solution from 4½d. carton! (1 lb.).**

**PROVE IT YOURSELF**

**Send for FREE SAMPLE, stating usual merchant**

4½d. ea.—1 doz. at 4½d.
3 doz. at 4d.

*Send for FREE SAMPLE now, to:* **J. MANGER & SON, LTD., Dept. B4, Kingsland, London, E.8**

B4/SB/35


**Newbiggin-by-the-Sea.**—For the erection of 62 U.D.C. houses and eight bungalows:—

*H. Wardhaugh, Whitley Bay ..... £16,712

**Newcastle-on-Tyne.**—For mineral water factory in Rosebery-crescent, for Messrs. J. H. Crawford & Son. Mr. J. Walton Taylor, architect, Union Buildings, St. John-street:—

*J. R. Rutherford & Son, Jesmond.

**Newcastle-on-Tyne.**—For the erection of showroom in Westgate-road, for Messrs. Dulcetto-Polyphon, Ltd., Charlotte-square. Messrs. Hetherington & Wilson, architects, County Chambers, 52, Westgate-road:—

*Stanley Miller, Ltd., Newcastle.

**Norfolk.**—Police houses in various parishes, for the C.C. Mr. C. J. Norton, F.R.I.B.A., County Architect, 23, Thorpe-road:—

Castle Rising police house—*G. Chambers & Sons, Snettisham, Norfolk.
West Winch police house—*R. M. Lewis, St. Germans, Norfolk.
Burnham Market, Gressenhall, Thursford and West Raynham police houses—*Fisher & Sons, Fakenham, Norfolk.

**North Middlesex.**—For heating and domestic hot-water installations at County Hospital nurses' home, for Middlesex C.C.:—

*Brightside Foundry & Engineering Co., Ltd., Birmingham ..... £1,475

**Nottingham.**—For erection of hall at Manvers central school, for the E.C.:—

E. Coleman, East Kirkby ..... £2,360

(In lieu of the tender previously recommended.)

**Oakengates.**—22 houses on two sites, for the U.D.C. Mr. Maurice S. Lee, engineer and surveyor:—

| Goldthorn estate— | 10 houses. | 12 houses. |
|---|---|---|
| J. Blakemore & Sons, Oakengates | £3,890 | £4,668 |
| F. Hood, Market Drayton | 3,842 | 4,031 |
| W. & A. Dalton, Wolverhampton | 3,475 | 4,170 |
| G. England, Oakengates | 3,459 | 4,095 |
| J. France & Sons, Wellington | 3,320 | 4,038 |
| T. France, Wellington | 3,250 | *3,816 |
| J. Weatherby,, Oakengates | 3,095 | 3,672 |
| Timmis & Davis, Wolverhampton | *3,040 | 3,450 |
| Purshouse & Gregory, Wednesfield | £7,436 | |

**Peterborough.**—Open-air swimming-bath at Fletton, for the London Brick Co. & Forders, Ltd.:—

*Jellings Builders, Peterborough (between £1,300 and £1,400).

**Peterfield.**—House at Foxcombe, near Harting, for Sir Phillip Reckitt, Bt.:—

*T. Couzens & Sons, Ltd.

**Portsmouth.**—Sub-station buildings, for the T.C.:—

Eastoke—
*Hansford Bros. ..... £435
Mengham—
*Hansford Bros. ..... 130

**Portsmouth.**—Erection of the senior boys' block at Portsdown School, for the T.C.:—

*Samuel Salter (Portsmouth), Ltd. ... £18,963

**Potters Bar.**—For enlargement of the Cranborne Council school, Potters Bar, to provide for additional classroom accommodation for 388 pupils, enlargement of assembly hall, kitchen, conversion of classroom into craft room and of existing kitchen into cloakrooms, and additional sanitary accommodation, for the Middlesex C.C.:—

| | | | |
|---|---|---|---|
| Richard Ginn & Son, Hertford | £8,699 | 0 | 0 |
| C. Miskin & Sons, Ltd., St. Albans | 8,230 | 0 | 0 |
| H. E. Winskell, Barnet | 7,918 | 13 | 8 |
| S. Worboys & Sons, Potters Bar | 7,877 | 0 | 0 |
| J. Laing & Son, Ltd., Mill Hill | 7,696 | 0 | 0 |
| Newby Bros., Ltd., Southgate | 7,620 | 16 | 0 |
| *Leightons (Contractors), Ltd., 62, Oxford Street, W.1 | 7,603 | 16 | 7 |

**Prudhoe.**—Welfare centre, for the Northumberland C.C. County Architect, County Hall, Newcastle-upon-Tyne:—

†G. B. Anderson, Prudhoe-on-Tyne £475 12 6

**Ramsgate.**—12 houses at the Dumpton housing estate, for the T.C.:—

| | | | |
|---|---|---|---|
| Grummant Bros., Ramsgate | £4,226 | 0 | 0 |
| D. & F. Home, Ramsgate | 4,104 | 0 | 0 |
| David T. Dorman, Ramsgate | 4,092 | 10 | 5 |
| W. C. Ward, Margate | 4,088 | 0 | 0 |
| ‡H. Field, Ramsgate | 4,068 | 0 | 0 |

**Rotherham.**—For erection of (*a*) sanitary conversions at Ellis-street, Laughton; (*b*) sanitary conversions at Wades-row, Laughton, for the R.D.C. Mr. A. E. Lant, engineer, Council Offices, Grove-road, Moorgate:—

| | | | |
|---|---|---|---|
| (*a*)—*T. W Outram & Sons | £166 | 2 | 3 |
| (*b*)—*H. Godley | 736 | 4 | 2 |

(Both of Rotherham.)

**Rothwell.**—Extensions to garage and new offices in Oulton-lane, for Messrs. Smith and Robinson, Kimberley-road, Harehills, Leeds. Mr. C. Johnson, architect, 4, Bradford-grove, Harehills, Leeds:—

*Bricklayer and concretor*—*T. Benn.
*Joiner*—*F. Holdsworth.
*Ironwork*—*J. W. Chapman, Ossett.

(Remainder of Leeds).

**Rotherham.**—Two-story warehouse as extensions to existing buildings, for Messrs. John Mason (Rotherham), Ltd., 36, High-street. Messrs. E. Hutchinson & Son, architects, Howard-street:—

*Coe & Lorriman, Rotherham.

**Salisbury.**—For the new housing scheme at Salisbury site, for the Lanarkshire C.C. Mr. Peter C. Smith, Lanarkshire Council's Housing Architect, Hamilton:—

*Excavation, brick and mason*—*W. Cleghorn & Sons, Newhaven.
*Joinery, carpentry and ironmongery*—*Greig & Allan, Bellshill.
*Slater*—*J. Wallace & Sons, Chryston.
*Plumber*—*Duncan, Johnstone, Strathavon.
*Plaster*—*Hugh McLean, Motherwell.
*Electric lighting and fittings, installation, etc.*—*Gordon Ward, Glasgow.

**Skelmanthorpe.**—Model dairy in Commercial-road, for the Industrial and Co-operative Provident Society, Ltd. Messrs. Simpson & Moxon, F.R.I.B.A., architects, Southgate-chambers, Wakefield:—

*Builder*—*B. Beever, Ingbirchworth, Sheffield.
*Joiner*—*J. Burton, Churwell.
*Plumber*—*H. Ackroyd, Skelmanthorpe.
*Slater*—*James Ives, Wakefield.

**Stainforth (Yorks).**—For erection of new senior schools, for Education Dept., West Riding C.C. Mr. H. Wormald, architect, County Hall, Wakefield:—

*T. Jenkinson & Sons (Doncaster), Ltd.

**Stockton-on-Tees.**—236 houses near South Mount Pleasant. Mr. G. P. Stainsby, architect, 25, High-street:—

*A. E. Hobbs, Hill House, Norton-on-Tees.

**Stornoway.**—New transit sheds and new offices, etc., at Stornoway Quay, for the Pier and Harbour Commissioners. Messrs. Henderson & Nicol, engineers, architects and surveyors, 16, Bridge-street, Aberdeen:—

*H. M. Murray & Co., Ltd., 121, West Regent-street, Glasgow.

**Stourbridge.**—24 houses at Lye, for the T.C. Mr. F. Woodward, Borough Surveyor:—

*Housing, Ltd., Birmingham.

**Stretford.**—Extensions to open-air schools in Longford-park, for the E.C. Mr. Percy Howard, A.R.I.B.A., architect, 88, Mosley-street, Manchester:—

*P. Hodkinson, Ltd., Manchester.

**Stretford.**—New building in Trafford Park, for Turner's Asbestos Cement Co., Trafford Park. Messrs. H. S. Fairhurst & Son, F. & A.R.I.B.A., architects, Chancery-buildings, 55, Brown-street, Manchester:—

*J. Gerrard & Sons, Ltd., Manchester.
(Estimated cost, £20,000.)

**Tamworth.**—For reconstruction of Bolebridge County Bridge on Route A.51, Tamworth, and spanning River Anker, including construction of new bridge (steel girders, concrete abutments, span 76 ft.), widening and redecking of flood bridge (span 34 ft.), for the Staffordshire C.C. Mr. R. S. Murt, County Surveyor, County-buildings, Stafford:—

*Tarmac, Ltd., Ettingshall, Wolverhampton ..... £13,908

**Teddington.**—For adaptation work at 40, Teddington Park, for the Middlesex C.C.:—

*Harding & Son ..... £230

**Wakefield.**—Special Subjects' Block and conveniences at South Kirkby Common-road Council school, for the West Riding C.C. Mr. H. Wormald, A.R.I.B.A., County Education Architect, County Hall:—

*R. K. Poskitt, Beal, near Knottingley, Yorks.

**Wednesbury.**—18 non-parlour houses on Margaret-road site, for the T.C. Mr. A. Booth, Borough Engineer and Surveyor:—

*A. C. S. Teece, Ltd., Wednesbury ... £5,364

**Wellingborough.**—Erection of 306 houses on the Doddington-road housing site, for the U.D.C. Mr. R. S. Henshaw, surveyor, Council Offices, Swannpool:—

*Eadie & Co., Wolverhampton ..... £79,684

**Widnes.**—School, for the Catholic authorities of St. Bede's. Messrs. T. Price & Son, architects, 77a, Lord-street, Liverpool:—

*J. E. Farrell, Appleton, Widnes.
(Estimated cost, £9,000.)

**Wigan.**—For erection of grammar school, for Higher Education Committee of the Corporation. Mr. A. E. Munby, F.R.I.B.A., architect, 9, Old-square, Lincoln's Inn, W.C.2:—

Works Dept., Wigan Corporation £42,406 0
*Henry Willcock & Co., Ltd., Wolverhampton ..... 35,203 10

**Willesden.**—For alterations to the Central Middlesex County Hospital, Acton-lane, N.W.10, for the Middlesex C.C.:—

*E. Plaistowe & Sons, Southall ..... £149

**Willenhall.**—Erection of workshop and foreman's office at Town Yard, for the U.D.C. Mr. G. A. Waite, surveyor, Town Hall:—

*J. Hickin & Sons, Willenhall ..... £565

**Worcester.**—Erection of relief offices and tuberculosis clinic, for the P.A.C. Mr. A. V. Rowe, County Architect, 38, Foregate-street:—

*Bridgewater Bros., Cradley Heath ... £2,585

**Worksop.**—Alterations to existing premises and erection of new offices at the Cattle Market, for the T.C. Mr. C. O. Allsopp, Borough Surveyor:—

*G. Bowles & Sons, Worksop.


'phone Bayswater 0163
that urgent inquiry for:— (2 lines)
WOOD BLOCK FLOORING, in Deal, Pine, Pitchpine, Maple, Jarrah, Gurjun, Oak, Teak, etc.
T. & G. BOARD FLOORS in above woods
STRIP OAK FLOORS, 3/8" and 13/16" thick
PARQUET FLOORS, PORTABLE FLOORS, SPRING FLOORS
TURPOLITH Composition Floors
Ask for Booklet "B"
TURPIN'S Parquet Flooring Co. 25, Notting Hill Gate, W.11
(Established 1866)

BUY BRITISH
FLOORINGS
WOOD BLOCK PARQUET
SOLID T & G HARDWOOD
PANELLING
POINT PLEASANT LONDON S.W.18
Stevens & Adams Ltd.
PHONE PUTNEY 4701 2-3-4

PARQUETRY
WOOD BLOCK FLOORS
JEFFERISS (CAMBERWELL) LTD.
45, Grove Lane, S.E.5. Phone: Rodney 3012
BRITISH WORKMEN ONLY

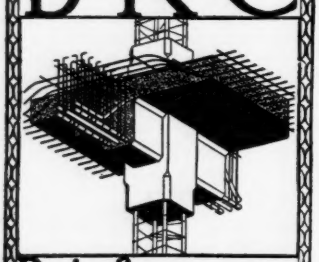
HANKIN & CO.
PAVING CONTRACTORS
Tarmac, Tar Paving, Crazy, York and Artificial Slab Paving, Concreting.
Tar dressing (hot and cold).
Gravel, Sand, Rockery Stone, Ballast, Cement, etc.
Materials Supplied Only or Laid Complete.
Estimates Submitted for all Methods of Road and Path Construction.
Specialists in Tar-Paved Tennis Courts and Playgrounds.
2½, 4 and 6 ton Rollers for Hire.
Southwood Rd., New Eltham, S.E.9
Telephone: Eltham 1742.

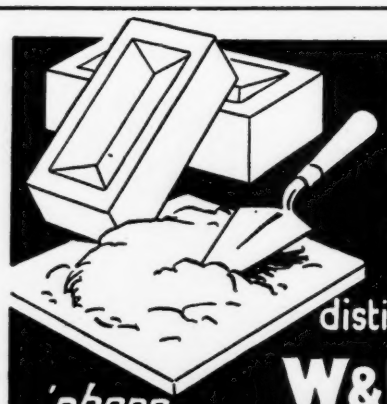
FITZPATRICK & SON
MASONS & PAVIORS
GRANITE MERCHANTS
SETTS & KERB (SH. & RD.)
ROAD AND SEWER CONTRACTORS
455, OLD FORD ROAD, LONDON, E.3
Telephones: ADVANCE 2991 (5 lines).

WOOD BLOCK FLOORING AND WOOD PAVING
The IMPROVED WOOD PAVEMENT CO., LTD.
BLACKFRIARS HOUSE, NEW BRIDGE STREET, LONDON, E.C.4

Telegrams: "Frolic, Liverpool." 'Phone 228 Bank
E. B. BURGESS & CO.
Tower Building, Water Street, Liverpool
WOOD BLOCK FLOORING AND PARQUETRY.

HOSPITAL & SCHOOL STOVES
SOLE MAKERS OF
WRIGHT'S IMPROVED AND ALSO SHORLAND'S PATENT WARM AIR VENTILATING PATTERNS.
GEO. WRIGHT (LONDON) LTD
19 NEWMAN ST. OXFORD ST. LONDON W.1.

B·R·C

Reinforcement
The BRITISH REINFORCED CONCRETE ENGINEERING CO., LTD.
Head Office: STAFFORD


BRICKS & MORTAR
are separate things. It's the way they are put together that distinguishes our work.
'phone HOP 6081
W&M NEGUS LTD.
Building Contractors
Station Works, KING JAMES ST. S.E.1